Central Puget Sound Regional Transit Authority

SOUNDTRANSIT

Attachment A

Regional Express Bus System Implementation Plan

Draft

October, 1998

TABLE OF CONTENTS

		Page
I.	**Executive Summary**	2
II.	**Introduction** General overview of the system.	5
III.	**Community Involvement** Review of the community involvement process followed during the development of the System Plan.	6
IV.	**System Plan Goals and Objectives** Statement of broad goals framing the general scope and direction of the System Plan, objectives intended to specifically state how goals may be met, and potential performance measures which are indicators of goal and objective attainment.	8
V.	**System Plan Strategies** Broad strategies outlined in the area of implementation, service, and management. Summary of results to date.	10
VI.	**Building in Flexibility** Discussion of collaborative process to be used to ensure that the plan remains relevant, serving community needs.	12
VII.	**System Design Guidelines** Description of guidelines used in developing the Regional Express system.	12
VIII.	**Service Standards and Performance Measures** Summary of guidelines used to design, evaluate, and modify routes.	12
IX.	**Service Implementation and Subarea Equity** Summary of estimated hours of service by year, by subarea.	16
X.	**Ridership Forecasts** Ridership model results.	17
XI.	**Regional Express Bus Route Summary**	19
XII.	**Financial Plan**	55

I. EXECUTIVE SUMMARY

Sound Transit's most expansive transit system is Regional Express, a strategic network of new bus routes connecting the major urban centers of Bellevue, Everett, Tacoma, and Seattle with other cities and communities in central Puget Sound.

As approved by voters in 1996, *Sound Move* – the Ten-Year Regional Transit System Plan – called for Sound Transit to create an extensive, efficient, and cost-effective regional bus transit system that would begin service in the year 2000.

Sound Move described a network of regional express bus routes, transit corridors, and major population and employment centers that would be served by high speed, frequent, two-way, all-day bus service that would seamlessly connect with Sound Transit's rail systems and other transit services.

Regional Express, a department of Sound Transit, is already ahead of schedule. In 1997, Sound Transit began funding numerous bus trips between Tacoma and Seattle, and this year Sound Transit funded additional trips between Bellevue and Seattle. Also this year Sound Transit purchased buses due for delivery in 1999, all of them featuring air conditioning, comfortable high-back reclining seats, overhead storage racks, and other amenities focused on passenger comfort.

Furthermore, Sound Transit has placed a priority on accessibility to Regional Express buses with plans to build 33 community connections projects, which include transit centers and park-and-ride lots with many public-requested features such as pedestrian and bike-friendly walkways and improved passenger shelters.

For 1999, Sound Transit has the opportunity to begin even more service on selected routes throughout the region, exceeding the expectations promised in *Sound Move*. The blueprint for implementing Regional Express bus transit service in 1999 and beyond is the Regional Bus System Plan.

The Regional Bus System Plan is the culmination of numerous meetings and outreach efforts where Sound Transit staff listened to and worked with people throughout the region including officials from local, state, and federal jurisdictions; the public; community and civic leaders; Community Transit; Everett Transit; King County Metro; and Pierce Transit. Through this extensive collaboration, the system plan has been carefully refined and analyzed to reflect and address regional and community needs while remaining fiscally responsible.

To successfully meet the system plan's aggressive schedule of service implementation goals, it will require positive regional cooperation and a shared inter-agency strategy to maximize existing financial and capital resources. These coordinated efforts with partner transit agencies will help create a truly seamless regional/local transit system with long-term economies and efficiencies.

The system plan lays the foundation for final policy decisions on which routes will be implemented, the phasing-in and level of bus service, and funding strategies.

MAJOR MILEPOSTS

***Sound Move* adopted in 1996 established:**

- A conceptual network of 20 regional express bus routes, transit corridors, and major population and employment centers.
- General descriptions of high speed, frequent, two-way, all-day bus service that would seamlessly connect with other transit services.
- Allows smart, flexible decision-making to adapt to new information, technology, and changing conditions

The Regional Express Bus System Plan, to be adopted in 1998, establishes:

- More detailed service characteristics including route locations, approximate number of stops, frequency of buses, and hours of operation.
- Phasing-in implementation of service.
- Financial plan, including number of vehicles needed.

The *Sound Move* Plan is then further refined through a similar process of staff, stakeholder, and Board level input. The on-going process then triggers a series of key decisions that must be made during 1999 that will ultimately provide completed form and detail to the Regional Express Bus System Plan. Included within this process will be decisions regarding:

Ongoing annual decisions on implementing Regional Express bus service, beginning in 1999:

- Exact bus stop locations.
- Integration of service with other Sound Transit systems and local transit services.
- Redeployment of local transit services freed up by Regional Express implementation.

II. INTRODUCTION

Sound Move called for the creation of an extensive, efficient, and cost-effective regional bus transit system to begin service in the year 2000. Regional Express is already ahead of schedule. Sound Transit began funding numerous bus trips between Tacoma and Seattle in 1997, as well as additional trips between Bellevue and Seattle this year. Regional Express Bus service will begin many routes in 1999, ahead of the promise made in *Sound Move*.

To meet the goal of implementing more Regional Express bus service in 1999, for the past six months Sound Transit staff has been analyzing the service implementation plan with lead staff from Community Transit, Everett Transit, King County Metro, and Pierce Transit, as well as by working closely with officials and staff from local jurisdictions.

The System Plan is designed to be the framework for the continuous, comprehensive planning that must ensue up until the September 1999 implementation of the Regional Bus System. This portion of the system design and implementation process will ensure that the system will be affordable, integrated, and accessible. This Plan will continue to expand through additional input and feedback from transit agencies, communities, jurisdictions, and major employers.

Designing a system within four existing systems is a monumental challenge that can only be accomplished through the efficient use of resources and joint service planning. The System Plan is the result of regional transit partners focusing on creating a regional network of transportation options.

The available funding for operating regional express bus service does not allow implementation of full service on all routes in 1999 and 2000. In addition, it is common practice in the transit industry to test the market for new service by beginning with the most productive service and later adding less productive elements. For most of the proposed regional express routes, service would be implemented over a period of several years, with some elements of the full service plan being deferred for one to four years after an individual route starts.

There are several different ways of doing this: defer weekend and/or evening service; begin with longer peak or base frequencies; or begin service along a portion of the route. The specific phasing plan depends on the type of service and the markets that are served. Deferral of some service is more feasible for routes serving new markets than for routes which supersede existing routes.

Following *Sound Move* Policy Direction

In developing the strategic plan for system development, Regional Express turned to *Sound Move* for policy direction and guidance. The table below compares the guidelines of *Sound Move* to the actions of Regional Express. Upon review, it is clear that Regional Express is proposing alternatives that will fulfill the expectations outlined in the ten-year plan.

Sound Move	**Regional Express Action**
"Regional Express buses will be purchased immediately and begin operating as soon as the vehicles are delivered."	Regional Express has received approval for the purchase of seventy (70) 40' buses manufactured by Gillig and twenty-five (25) 60' articulated buses manufactured by New Flyer. The New Flyer contract includes an option for purchasing 50 additional buses. The department is working with Pierce Transit to purchase and lease compressed natural gas (CNG) 40' buses. Buses are scheduled to begin arriving in early 1999.
"The RTA will work closely with local transit operators to put Regional Express bus service in place."	Regional Express has created a route design process that is inclusive. The transit agencies are partners in the development of the structure of the Service Implementation Plan.
"Regional bus service will be expanded along with local transit service changes to make sure the services are fully coordinated and that subareas receive maximum improvements while the region receives maximum mobility."	The System Plan outlines a phased approach to service deployment. This strategy will allow maximum coordination among the transit agencies and more efficient regional connections.
"In areas where existing transit markets or capital facilities do not currently support the planned new service levels, those services will be added in increments to match demand. The RTA and local transit agencies will monitor system performance and recommend changes to subarea service plans that are consistent with the RTA's adopted financial policies."	The phasing in of services also is a response to the development of additional capital facilities throughout the program. As facilities are expanded and/or constructed, the phased implementation allows for timely service improvements and opportunities for increasing the efficiencies of some of the routes.

III. COMMUNITY INVOLVEMENT

The formal planning for the new regional express bus system is based upon the integration of classical transportation demand analysis and public/stakeholder preferences. A new system challenges transportation planners to organize and present the myriad of transportation choices inter-mixed with public preferences. Our goal of seeking maximum and significant input from our regional stakeholders has been largely met and will continue to be one of the cornerstones of the Regional Express service planning process.

Community interest; represented by the public at-large, local jurisdictions, business and commercial sectors; was a major element in the development of Regional Express Bus System alternatives. Staff has incorporated the interest of the community at every phase of the planning process. A comprehensive set of opportunities for input were developed including:

- Holding a wide variety of public meetings throughout the region.
- Participation in regional transportation fairs.
- Development of a Regional Express Hotline.
- Participation with the Speaker's Bureau.
- Establishment of information kiosks at key employment centers and organizations.
- Utilization of multimedia resources including radio, newspapers, web site, cable access and a variety of other creative outlets.
- Coordination of information with local jurisdictions and major employers.

The response has been outstanding; and as a result, public opinion has significantly shaped the final recommendations presented to the Board. Staff has incorporated the communities' interests and priorities into the recommended system alternatives.

The Service Implementation Plan focused on the original program objectives while being particularly sensitive to stakeholder concerns. Staff was impressed with the public's understanding that, at some point, tough decisions have to be made regarding service structure, frequency, funding priorities, and other components. It is clear that the public expects a fair and impartial service plan. In addition, the communities also expect a high degree of creativity amongst local operators and a long-term plan that clarifies future service expectations. Extensive outreach efforts were made to all sectors of our community.

Planning efforts also included contact with major employers and local jurisdictions. The transfer analysis that was done as a part of the development of the service alternatives was particularly cognizant of integrating schedule plans with business hours. In addition, consideration was given to reverse commute demands, including Welfare to Work Programs and housing development.

Regional Express service will comply fully with the Americans with Disabilities Act (ADA). The Sound Transit fleet will be 100% accessible. All buses will provide accommodations for wheelchairs and special-needs passengers and "kneeling" capacity. The Regional Bus and Community Connections Divisions are working closely with our transit partners to ensure accessibility issues are fully addressed. Sound Transit will work with regional partners and the Federal Transit Administration to determine its ADA responsibilities associated with Regional Express bus service. These discussions could result in a financial responsibility to Sound Transit of less than 15% of direct operating costs, which could provide additional resources to cover expansion hours.

Beginning early 1999, Regional Express will embark on a new series of community outreach efforts in partnership with other transit agencies. The series will focus on the second part of the system design process that involves working on detailed bus stop identification and integration with local services. Regional Express has begun planning joint community meetings with the transit agencies in an effort to combine resources and to ensure the public receives information that clearly shows the movement towards a seamless regional bus system.

IV. SYSTEM PLAN GOALS AND OBJECTIVES

The goal of Regional Express is to deliver a regional bus transit system as promised to the voters in *Sound Move*. It must also meet the objectives identified by the Sound Transit Board and integrate seamlessly with other departments of Sound Transit and our partner transit agencies.

The following four broad goals frame the general scope and direction for the System Plan. They are intended as general statements of ultimate end-results, which pertain directly to regional integration of bus, commuter rail, ferry, and light rail. The goals correspond to four categories: travel and mobility, quality of service, fiscal accountability, and service utilization.

Listed below each System Plan goal are objectives, which are specific statements of ways in which the goal may be met and potential performance measures, which are indicators of goal and objective attainment. Quantifiable measures will facilitate monitoring and evaluation of bus operations as a network, as well as assessing the performance of individual routes. Many of these quantifiable measures will be incorporated in the *Regional Bus Service Standards and Performance Measures.* The service standards are currently being finalized by the Service Implementation Plan (SIP) Committee. This Committee is comprised of representatives from each partner transit agency.

Goal #1: Enhance Mobility.
Operate an effective bus system which is convenient and accessible to the public. The system will provide additional regional connections, as well as connect major urban centers in the three-county area.

Objectives
1. Develop market-based transit services that respond to existing and potential bus transit ridership.
2. Configure the bus network to enhance regional mobility given changes in demographics and travel demand that have occurred over the past three years.
3. Facilitate passenger transfers and minimize waiting times by integrating service with other transit providers, as well as other Sound Transit modes.

Potential Performance Measures
1. Bus service frequencies to major employers.
2. Number of reverse commute and regional bus trips to suburban employment centers.
3. Service frequencies.
4. Average transfer times to other bus routes at major transfer centers.
5. Number of bus trips and service frequencies at rail stations.

Goal #2: Quality of Service.
Provide a high-quality transit environment.

Objectives
1. Operate a safe, reliable bus system.
2. Provide a clean, comfortable environment for passengers.
3. Provide bus services that are a viable transportation alternative to the automobile.

Potential Performance Measures
1. Number of accidents.
2. Frequency of roadcalls.
3. Frequency of missed trips.
4. Minimum average fleet age.
5. Transit travel times on regional express routes.

Goal #3: Fiscal accountability.
Contribute to the long-term financial stability of Sound Transit by operating an efficient and cost-effective bus division.

Objectives
1. Maximize the farebox recovery.
2. Minimize operating costs.

Potential Performance Measures
1. Operating ratio (farebox revenue as a percentage of operating costs).
2. Annual operating cost.
3. Cost per unit of service.
4. Cost per passenger trip.

Goal #4: Efficient Service Utilization.
Promote transit system usage.

Objectives
1. Maximize service effectiveness.
2. Work with businesses, civic organizations, and residents to promote transit.
3. Work closely with transit agencies in coordinating services
4. Work with regional transportation partners to create a seamless system

Potential Performance Measures
1. Average weekday, Saturday, and Sunday ridership on route patterns in a corridor.
2. Average service frequencies by route.
3. Passengers per revenue-hour by route.
4. Passengers per revenue mile by route.
5. Number of park and ride lots and utilization in major travel corridors.
6. Frequency of transit service in major travel corridors.
7. Corridor average daily ridership.
8. Average maximum loads by route and by time of day.

V. SYSTEM PLAN STRATEGIES

Strategies have been identified to help focus on the System Plan objectives. The strategies are grouped into three categories and are identified with a unique letter/number code for reference.

- Implementation
- Service
- Management

Successful implementation of the regional bus service depends on an effective phasing and coordination process. Successful deployment of regional bus service requires following a reasonable implementation schedule, completing community involvement, and maintaining the transit agency coordination.

Implementation Strategies

Strategy I-1. System Design: Continue to develop the Regional Express bus system plan in partnership with the region's transit agencies and input from local jurisdictions, major employers, and the public.

> **1998:** Design flexibility into the System Plan that allows for adjustments and a responsive approach to changes in environment and travel patterns.
>
> Complete system plan details in preparation for the second phase of comprehensive route planning and community outreach.
>
> **1999:** Continue to work with transit agencies in service planning to provide regional connections. Operate approximately 93,000 annual service hours.
>
> **2000:** Operate approximately 312,000 annual hours of service.
>
> **2001-2006:** Operate approximately 3.3 million hours of service. Service will be designed and implemented using the service standards and performance measures, community outreach, local jurisdictions, employers, and educational institutions. Pursue the full range of service strategies with each subarea as a part of this process.

Service Strategies

Strategy S-1. Allocate Sound Transit Fleet to operating agencies. Work closely with agencies to ensure uniformity in operation and service.

Strategy S-2. Expand regional mobility options through multimodal connections. Consider flexible service options in conjunction with other service modifications and improvements by local service and other transportation issues identified by local jurisdictions.

Strategy S-3. Partner with appropriate agencies to work to improve transit access at regional intermodal passenger facilities, such as ferry terminals, the airport, and rail stations by providing convenient transit connections with frequent service and coordinated schedules.

Management Strategies

Strategy M-1. Define clear measures of success for regional bus services, such as measures of cost efficiency. In conjunction with design and implementation of new services, develop a process with the transit agencies and communities whereby such services will be modified or reinvested if the service is not successful.

Strategy M-2. Establish a series of targets for measuring customer satisfaction.

Strategy M-3. Establish the bus element of the Six-Year Plan

Results to Date

Seattle – Tacoma Express

In September 1997 Sound Transit, in cooperation with Pierce Transit, enhanced the service on the popular Tacoma-Seattle Express service. Initially, Sound Transit financed six weekday trips. Since then, Sound Transit has responded to more requests for service by financing a total of 26 trips each weekday between Seattle and Tacoma and two trips every Saturday.

Ridership for this popular service has increased significantly over the past year. The Sound Transit-Pierce Transit partnership on this service has produced a daily ridership increase of approximately 25%. This results in a reduction of at least 250 cars driving between Tacoma and Seattle each day.

Bellevue to Seattle

Sound Transit is funding a total of 16 weekday trips including three new afternoon peak-hour trips between 4:45 and 6:20 p.m. This means between 4:45 and 5:45 p.m. eastside riders will have buses departing for Seattle every ten minutes instead of the current 15-minute interval. For eastside riders traveling to Seattle for early evening sports and other events, a new 6 p.m. trip is added to the current schedule between 5:45 and 6:20 p.m. routes, reducing the wait for these popular buses by one-half. Sound Transit is also funding eight morning peak-hour trips.

Sound Transit's funding has allowed Metro Transit to increase bus service between Issaquah and Seattle and the University District and the eastside. With the increased service from Sound Transit and Metro Transit, up to 150 cars will not be driving on eastside highways, therefore reducing traffic congestion and helping improve air quality.

VI. BUILDING IN FLEXIBILITY

The System Plan is designed to provide the framework and structure for the regional routes, phasing strategy, and financial plan. Within the Plan there are opportunities for changes and modifications. Early in 1999, Regional Express will begin the second half of the service planning process. This process will involve working with all of the transit agencies, jurisdictions, and major employers to examine specific bus stop locations, minor route adjustments, and service scheduling.

Regional Express will work closely with our partnering agencies in combining resources to produce joint community meetings. These meetings will allow the public to review the local and regional integrated services and the additional regional connections.

VII. SYSTEM DESIGN GUIDELINES

Using the system goals and objectives as an initial reference point, the system design process provided a system-wide quantitative and qualitative analysis of the Regional Express system. The process also provides a solid foundation for future service development by making the service reliable and productive.

The following strategies were used in developing the recommended system plan:

- *Sound Move* is the starting point for the design of each route; each route had one alternative that matched service level and routing of the 1996 plan.
- Some alternatives reviewed attempted to speed up service by making fewer stops, especially where time-consuming deviations would be required.
- Route design considered the advantages of proposed Community Connection and HOV access projects.
- For most routes, stops are limited to major transfer points, park and ride lots, and major employment concentrations.
- Alternatives that were specifically suggested by operating agencies were included in the route analysis.
- Alternatives that made more efficient use of resources have been included.
- The typical span of service at full implementation is from 5:00 a.m. to 11 p.m. on weekdays, and 6:00 a.m. to 10:00 p.m. on weekends.

VIII. SERVICE STANDARDS AND PERFORMANCE MEASURES

Service standards are a set of guidelines used to design, evaluate, and modify routes. Regional Express is currently working with its transit partners to finalize service standards and performance measures which will assist in the implementation and on-going monitoring of the Regional Express system. Service standards will address service quality criteria, service utilization/productivity, service management and the development/approval/implementation process. The major elements of the Regional Bus Service Standards and performance Measures include:

- Level of Service
- Service Span
- On-Time Performance Review
- Effectiveness Review
- Route Performance
- Detailed Review of Poor Performers
- Awareness
- Evaluation of Service Requests
- Service Adjustment Process
- Annual Service and Operations Plan

The Regional Express System will be fully coordinated with the services provided by the four public transportation providers in the Sound Transit service area: Community Transit, Everett Transit, King County Metro, and Pierce Transit. It should have elements that are consistent throughout the system. Since it will be marketed as a new type of service, this consistency is important for the public to understand how, when, and where the system can be used. The design guidelines used in the service planning and development for the new service have also been incorporated in the document.

Level of Service
Both policy and demand determine the level of service on a route. Routes should operate in consistent time periods and at regular intervals. While a high level of demand may dictate that a route be provided with more frequent service, policy will determine the maximum headway regardless of how low the demand.

Service Span
The service span, or the hours of operation of an individual route, should be based on demand and relate to the operating times of the transit center being served and of the other system(s) in the vicinity. Special demand characteristics should also be taken into consideration. The typical span of service would be from 5:00 a.m. to 11:00 p.m. on weekdays, 6:00 a.m. to 10:00 p.m. on Saturdays, and from 6:00 a.m. to 10:00 p.m. on Sundays.

On-Time Performance Review
One of the critical success factors for the Regional Express system is providing convenient and reliable transfers. Therefore, on-time performance will be closely monitored.

Effectiveness Review
Route evaluation will follow a two-step process. The first step is to identify how each route performs in terms of ridership and cost effectiveness compared with the performance standards. Once this screening process is completed, the second step is a detailed evaluation of each route that is either not performing up to standard or is performing well above average. Routes that are not performing as expected could be subject to a number of actions including frequency reduction, service span revision, realignment, rescheduling, route consolidation or other restructuring, extensive marketing efforts, or elimination.

As the routes comprising the Regional Express system become established, the performance achieved by them will be used to modify the performance standards.

Route Performance
Standards for individual route productivity will be based on actual experience. Those performing marginally or satisfactorily will be scrutinized for ways to improve productivity. Routes significantly exceeding the "good" standard will be considered for improved service. Those that fall in the "unsatisfactory" category will receive a more detailed analysis.

Each route will be reviewed annually. Routes will be reviewed more often if ridership trends are negative, special requests for service are received, or other special circumstances are noted. The evaluation process will also include routes with good performance. These will be candidates for more frequent service or some other kind of service increase.

Detailed Review of Poor Performers
Unsatisfactory routes will receive a more detailed analysis in step two. At this level in the performance evaluation process, a route's performance in all standards will be analyzed. This detailed evaluation will examine performance by time period, day of week, and route segment.

Awareness
In conducting the evaluation of poor performing routes, data may be collected on the general awareness of residents in its vicinity. Surveys may be used that are designed to determine reasons why residents do not use the service and what changes should be made to attract more riders. Telephone household surveys or field interviews are two methods for collecting this data.

Evaluation of Service Requests
Requests for service and service changes will be evaluated in a systematic manner to ensure compliance with the service design guidelines and to ensure that the needs and desires of the Sound Transit customers are being met.

Service Adjustment Process
There are three categories of service adjustments. The first type is identified through the Annual Service and Operations Plan. The Regional Express System Service Standards are used in the development of the annual update to the Regional Express System Plan. This Plan involves an analysis of each individual Regional Express bus route, as well as the system as a whole. This is when potential service modifications are identified and a plan is created for their implementation. Service changes are made when there is a compelling need such as a significant benefit to the public, or it is necessary to reduce costs or solve an operational problem and may take place every four months.

In addition, a Comprehensive Operational Analysis (COA) is conducted of the Regional Express system every five years or as the system warrants.

Annual Service and Operations Plan
The annual update to the Regional Express System Plan is the cornerstone of the on-going service adjustment process. It identifies service modifications for the upcoming year based on performance and the application of the service standards. It will include a comprehensive report on the ongoing analysis and evaluation.

An ongoing analysis of schedule efficiency and ridership on groups of trips is conducted. This includes minor adjustments to schedules, elimination or addition of selected groups of trips, interlining changes, and other minor route changes identified by drivers and other operations personnel.

Comprehensive Operational Analysis (COA)
Every five years or as warranted by system development, Sound Transit will perform a Comprehensive Operational Analysis of the Regional Express System. This will involve a detailed analysis of ridership patterns and system operations. It will include a ride check that entails conducting an on/off passenger count of every trip on each route separately for weekdays, Saturdays, and Sundays. A running time analysis and schedule adherence check will also be performed. Five-year ridership trends will be reviewed on a system-wide and an individual route basis. The COA may include other market research activity as appropriate such as on-board passenger surveys, telephone household surveys, and demographic analysis.

If there is a compelling need to do so, the COA could result in a significant restructuring of service in specific corridors or throughout the entire service area. Recommendations are developed through a team effort involving all affected parties including the other four operators.

Management of Route Changes - Level of Authority
Future route design will be subject to the approval of the Sound Transit Board. The types of changes will characterize the level of Board participation. All major changes, including those changes associated with the annual implementation of the Sound Transit Express Bus Service Plans will be formally presented to the Board for approval.

Lesser order of magnitude changes as detailed below will be controlled through the management of Board approved policies and procedures. A typical division of route change at the administrative level would include:

- Any single change or cumulative changes in a service schedule which affects the established weekly service hours for a route by 25% or less.
- Any change in route location which does not move the location of the stop by more than a half mile.
- In the presence of an emergency which requires change to established routes or schedules or classes of service, the director may implement such change for the necessary period of time or until the Sound Transit's Executive Committee establishes a timeframe.
- Other routes, such as tripper service, limited, special, and other types of transit routes may be established by the Director, consistent with annual appropriations and the Regional Express System Plan.

Prior to implementation, fully detailed procedures will identify responsible parties, the mechanics of route analysis and schedule development, and the internal review and decision making process. Regularly scheduled changes will be incorporated on a quarterly basis. Communications of these changes will be formally identified in the detailed policy manual. All changes, with the exception of emergency reroutes which will be communicated to the Board at the earliest convenience, will be presented to the executive staff and Board prior to implementation.

IX. SERVICE IMPLEMENTATION AND SUBAREA EQUITY

New service resources totaling approximately 93,000 hours will have been deployed by September 1999. These hours will be distributed in accordance with the subarea equity of the Sound Transit service area. Table 1 provides a summary of the estimated hours of service implemented by year.

Table 1: Summary of Service Hours

Year	Snohomish	East King	South King	Pierce	TOTAL*
1997	0	0	0	2,000	2,000
1998	0	1,300	0	14,700	16,000
1999	15,100	29,500	12,000	36,200	92,800
2000	56,700	110,800	43,300	101,300	311,600
2001	64,000	159,700	49,800	116,000	389,600
2002	68,700	172,400	58,500	129,300	427,200
2003	74,100	188,300	63,900	139,900	466,300
2004	81,200	208,500	74,700	149,600	514,100
2005	91,100	211,600	74,700	163,700	541,400
2006	92,400	215,700	75,500	163,700	547,600
Total Program Hours	543,300	1,297,800	452,400	1,015,100	3,308,600
% of Total	16%	39%	14%	31%	100%

*Cumulative

Subarea Changes Since *Sound Move*

There have been several service enhancements to the regional network since the November 1996 vote that affect the Regional Bus System Plan. The following are the significant changes that were evaluated in developing the System Plan.

Snohomish County

Community Transit recently improved service along the SR-99 corridor. At this time, bus service operates every 15 minutes from 5 a.m. until 7 p.m. on weekdays. The service also operates every 30 minutes all other times. The total span of service is 5 a.m. to Midnight on weekdays, 6 a.m. to midnight on Saturdays and 6 a.m. to 11:30 p.m. on Sundays and holidays.

East King County
King County Metro currently operates route 226 between Bellevue and Seattle at a greater service level than identified in *Sound Move* for this route. During the afternoon peak times, service operates every 7 to 8 minutes in the peak direction and every 10 minutes in the off-peak direction.

Pierce County
Seattle Express service currently operates at a greater service level than identified in *Sound Move* for this route.

X. RIDERSHIP FORECASTS

Ridership modeling was performed to assess system level Regional Bus ridership to ensure there have not been any significant changes since the approval of *Sound Move*. The ridership model produces more accurate results at higher levels of aggregation, thus is most useful for a system level analysis, such as regional bus performance or corridor level analysis, such as light rail corridor analysis. The model is structured so that the transit ridership results are based on observed origins and destinations of transit users, observed transit line volumes, and a realistic simulation of observed transit service characteristics. External changes in demographics and in highway travel time and cost are staged into the process distinctly in phases prior to estimating impacts of the incremental changes in transit service. The model that will be used relies on the Puget Sound Regional Council model for data pertaining to external changes. The results of the ridership models show that there have been no significant shifts in ridership in the forecast year of 2010 between *Sound Move* and the recommended system plan.

As the regional bus service begins operations, Regional Express will establish instruments of ridership measurement and forecasting that will provide various levels of analysis including by segment, corridor, route, and system-wide.

Year 2010 Daily Boardings for Regional Express Bus Routes

Regional Express Model Run			
Route Number	Headway(min)		Passengers
	Peak	Off-Peak	Daily Boardings
Route A4N	30	30	2,600
Route B3A	30		1,200
Route B3B	30		1,800
Route B3O		30	3,500
Route C3	30	60	2,100
Route D2	30	60	1,500
Route F1mod	15	30	6,000
Route G1d	7.5	15	13,800
Route G2c	15	30	5,300
Route H2	15	30	3,600
Route I1	15	30	1,800
Route J2m	30	60	800
Route M3	30	30	1,700
Route N4mod	30	30	1,500
Route O (590)	7.5	None	1,100
Route O (594)	None	30	1,500
Route O (595)	30	None	100
Route P (591)	20	None	800
Route P (592)	20	None	200
Route O4	30	60	100
Route T2	30	60	300
Route U7	30	60	900
			52,200

XI. REGIONAL EXPRESS BUS ROUTE SUMMARY

Three to six alternatives for each of the proposed 20 regional express routes were analyzed during the planning process. The alternatives were discussed at public meetings in August. In September, a set of four alternative system plans was developed. Each alternative emphasized a specific theme or service characteristic. The four alternatives were presented at public meetings in September and to local agencies, governments, and major employers. The characteristics which received the most support were high-speed service and the use of a focused system plan to ensure efficient use of resources.

Implementation and Phasing

The available funding for operating Regional Express Bus Service does not allow implementation of full service on all routes in 1999 and 2000. In addition, it is common practice in the transit industry to test the market for new service by beginning with the most productive service and later adding less productive elements. For most of the proposed Regional Express routes, service would be implemented over a period of several years, with some elements of the full service plan being deferred for one to four years after an individual route starts.

For a route serving a new market, a typical phasing plan might be:

- Year 1: start 30-minute peak and 60-minute midday service
- Year 2: add evening and Saturday service
- Year 3: add Sunday service
- Year 4: improve midday frequency to every 30 minutes

For a route serving an existing market (e.g.; Route G or O/P), a typical phasing plan might be:

- Year 1: start service with existing frequencies and hours of service
- Year 2: extend evening hours
- Year 3: add more peak trips in both directions
- Year 4: improve off-peak frequencies

A: Everett to Aurora Village

This route was originally intended to operate from Everett to Aurora Village via SR 99. In this respect it differs from most of the other proposed express routes, which primarily use freeways with HOV lanes. The original intent was for Route A to enhance Community Transit (CT) route 610, maintaining the same stop pattern. However, CT has recently upgraded the weekday service on route 610 to every 15 minutes.

The *Sound Move* plan allows for the adoption of alternatives during detailed planning that "achieve the same system goals and benefits more cost-effectively." In this case, the Service Implementation Plan includes an alternative routing along I-5. This routing would still provide a link from Everett to North King County, but with a terminal at Northgate instead of Aurora Village (see the enclosed route map for details). This routing would also supplement service provided by Route B along the I-5 corridor, allowing some trips on Route B to make fewer stops, thus improving overall trip times.

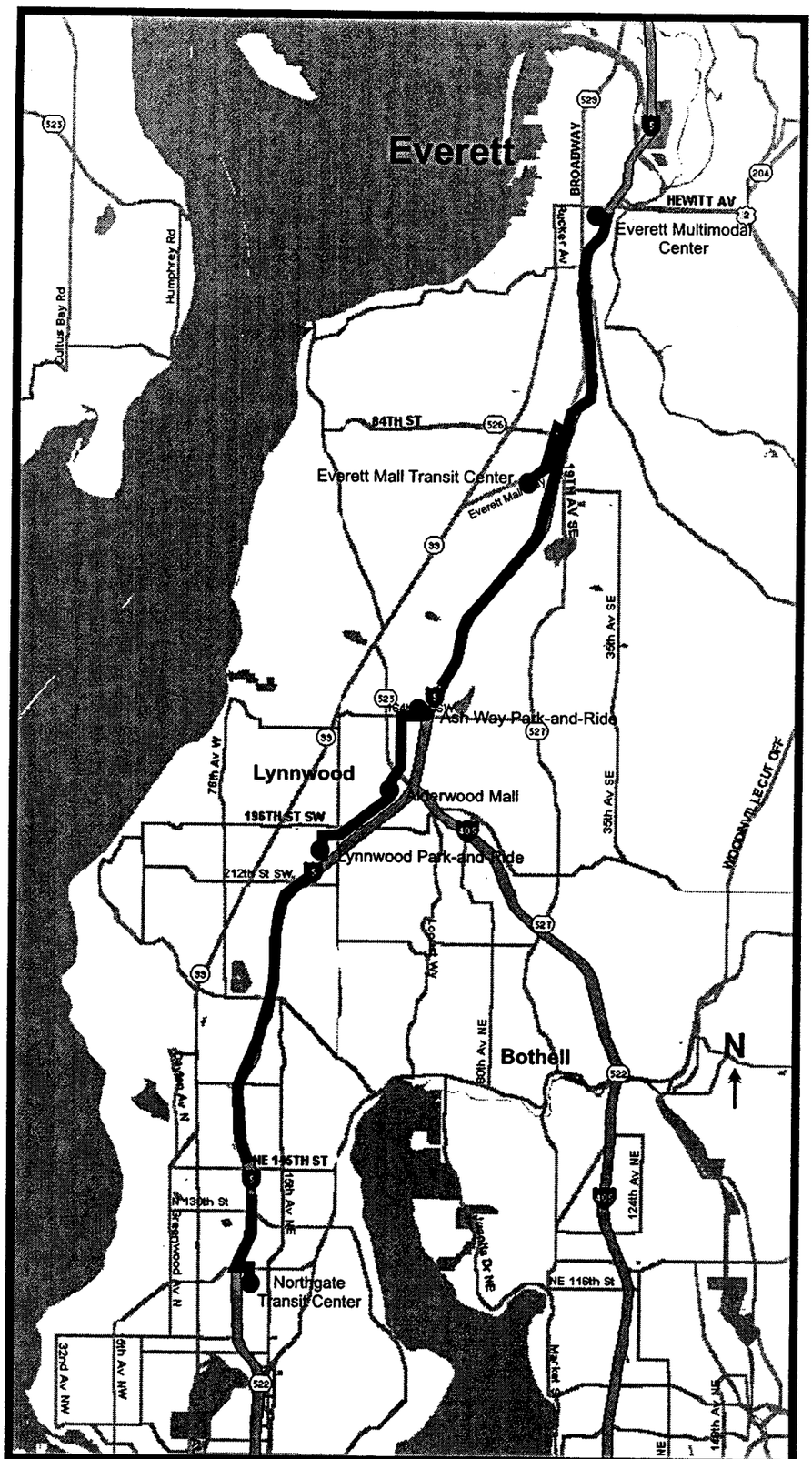
Principal stops along Route A may include:

- Everett Multimodal Center
- Everett Mall Transit Center
- Ash Way Park and Ride Lot
- Alderwood Mall
- Lynnwood Transit Center
- Northgate Transit Center

Other possible stops include the downtown Everett Transit Center, Mountlake Terrace Park and Ride Lot, and the 145th Street freeway stop.

Service would be phased in over a period of several years. Projected operating statistics for full operation of Route A are shown below. Costs for this service are allocated wholly to the Snohomish County subarea.

	Service Frequency (minutes)			**Trip Time**	**Annual Service Hours**	**Start Date**
	Peak	**Mid-day**	**Evening**			
Weekday	30	30	60	52	22,000	Sept. 2000
Sat./Sun.	-	30/60	60			



Legend:
Route A
Bus Stops for Route A

Route A
Everett to Northgate

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B: Everett to Mountlake Terrace/Seattle: I-5

Route B would connect major collection points in Snohomish County to downtown Seattle with all-day, bi-directional service. This service would supplement numerous existing Community Transit routes that currently provide primarily peak-direction express service to Seattle. Off-peak service would be provided to a number of locations that are currently along CT Route 418, so it is identified as a redeployable route.

Current CT commuter express service to downtown Seattle and the University District is very frequent during the peak periods and strongly oriented to these locations as a work or school trip destination. Route B would complement these routes by adding more peak-hour trips, providing reverse-direction commute trips, providing midday and evening back-up for peak-hour express users, extending the span of operation to serve those with varying or off-peak shift times, and serving more types of destinations.

The proposed service plan for Route B includes two separate branches (except off-peak), with each branch serving some of the proposed stops. This would provide faster travel times than a single route. During off-peak hours there would be a single combined route.

Principal stops along route B1 may include:

- Downtown Everett Transit Center
- Everett Multimodal Center
- Eastmont Park and Ride Lot (interim stop until 112th Street Park and Ride Lot opens)
- Downtown Seattle

Principal stops along Route B2 may include:

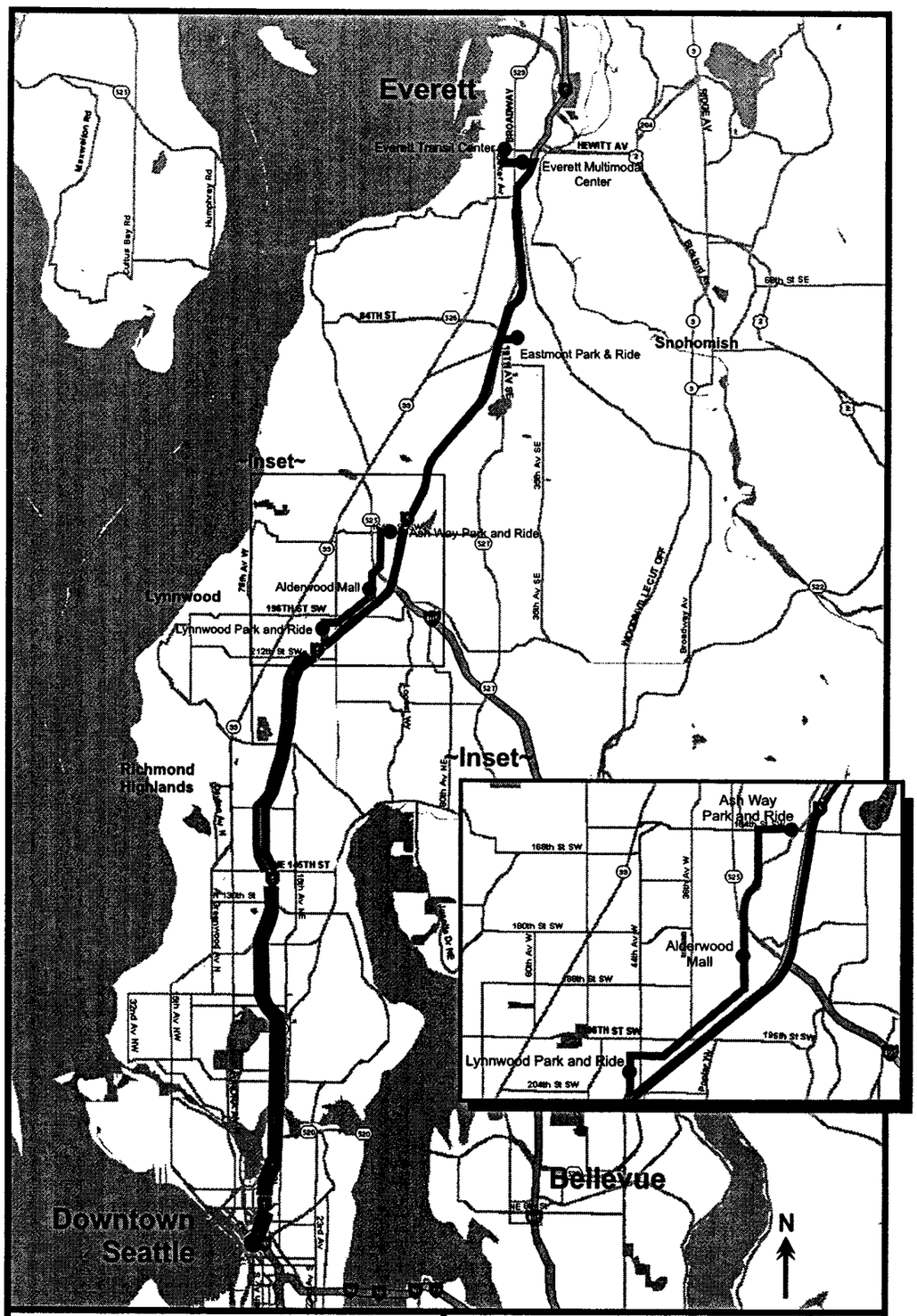
- Ash Way Park and Ride Lot
- Alderwood Mall
- Lynnwood Transit Center
- Downtown Seattle

Some off-peak or reverse-peak trips may include stops at Mountlake Terrace Park and Ride Lot, 145th Street freeway stop, Northgate Transit Center, or 45th Street freeway stop.

Service is projected to begin in September 1999. Service would be phased in over a period of several years. Projected operating statistics for full operation of Route B are shown below. Costs for this service are allocated wholly to the Snohomish County subarea.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	30*	30*	60	50-66 (branches)	47,900	September 1999
Sat./Sun.	-	30/60	60			

* on each branch



Legend:

Route B1, Everett to Seattle

Route B2, Ash Way to Seattle

Bus Stops for Route B

Route B (Peak Hours)
Route B1
Everett to Seattle
Route B2
Ash Way to Seattle

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C: Everett to Bellevue: SR 527

Regional Express Route C connects Everett and other locations in Snohomish County to downtown Bellevue with all-day, bi-directional service. It would also serve King County park and ride lots along the I-405 corridor, and costs would be allocated between the Snohomish and East King County sub-areas. In the *Sound Move* plan, Route C was proposed to operate via SR527 through the Mill Creek area, making limited stops.

Sound Move allows for the adoption of alternatives during detailed planning that "achieve the same system goals and benefits more cost-effectively." In this case, the Service Implementation Plan includes an alternative that would operate via I-5. This would provide faster service from major access points such as Ash Way Park and Ride Lot. The SR 527 corridor is scheduled for major highway construction in the near future. Potential patrons from the Mill Creek area can drive to park and ride lots such as Ash Way or Canyon Park, or can use CT local service to reach one of those access points. Additional service along the SR 527 corridor may be considered in the future based on ridership demand.

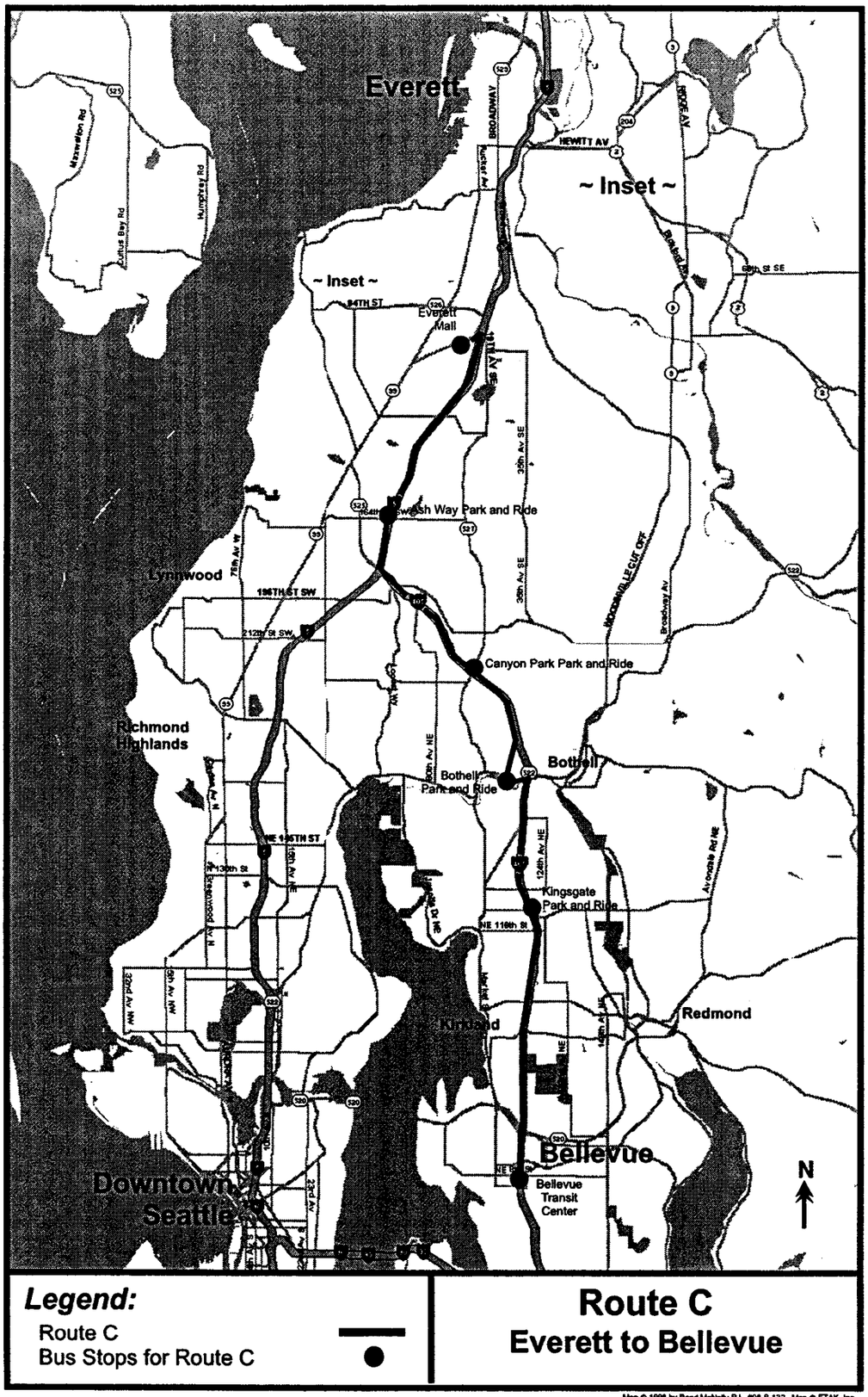
Principal stops along Route C may include:

- Everett Mall Transit Center
- Ash Way Park and Ride Lot
- Canyon Park Park and Ride Lot
- Bothell Park and Ride Lot
- Kingsgate Park and Ride Lot
- Bellevue Transit Center

Additional stops could include the Brickyard and Houghton park and ride lots.

Service is projected to begin in September 1999 and would be phased in over a period of several years. Projected operating statistics for full operation of Route C are shown below. Costs for this service are allocated to the Snohomish and East King subareas.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	30	60	60	45-50	16,300	September 1999
Sat./Sun.	-	60	60			



Legend:

Route C

Bus Stops for Route C

Route C
Everett to Bellevue

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D: Lynnwood to Bellevue: I-405

Regional Express Route D would connect major collection points in southern Snohomish County to downtown Bellevue with all-day, bi-directional service. It would also serve locations in northeast King County. Costs would be allocated between the Snohomish and East King County sub-areas. Route D would have some common stops with Route C between Bothell and Bellevue to provide relatively frequent service between these locations.

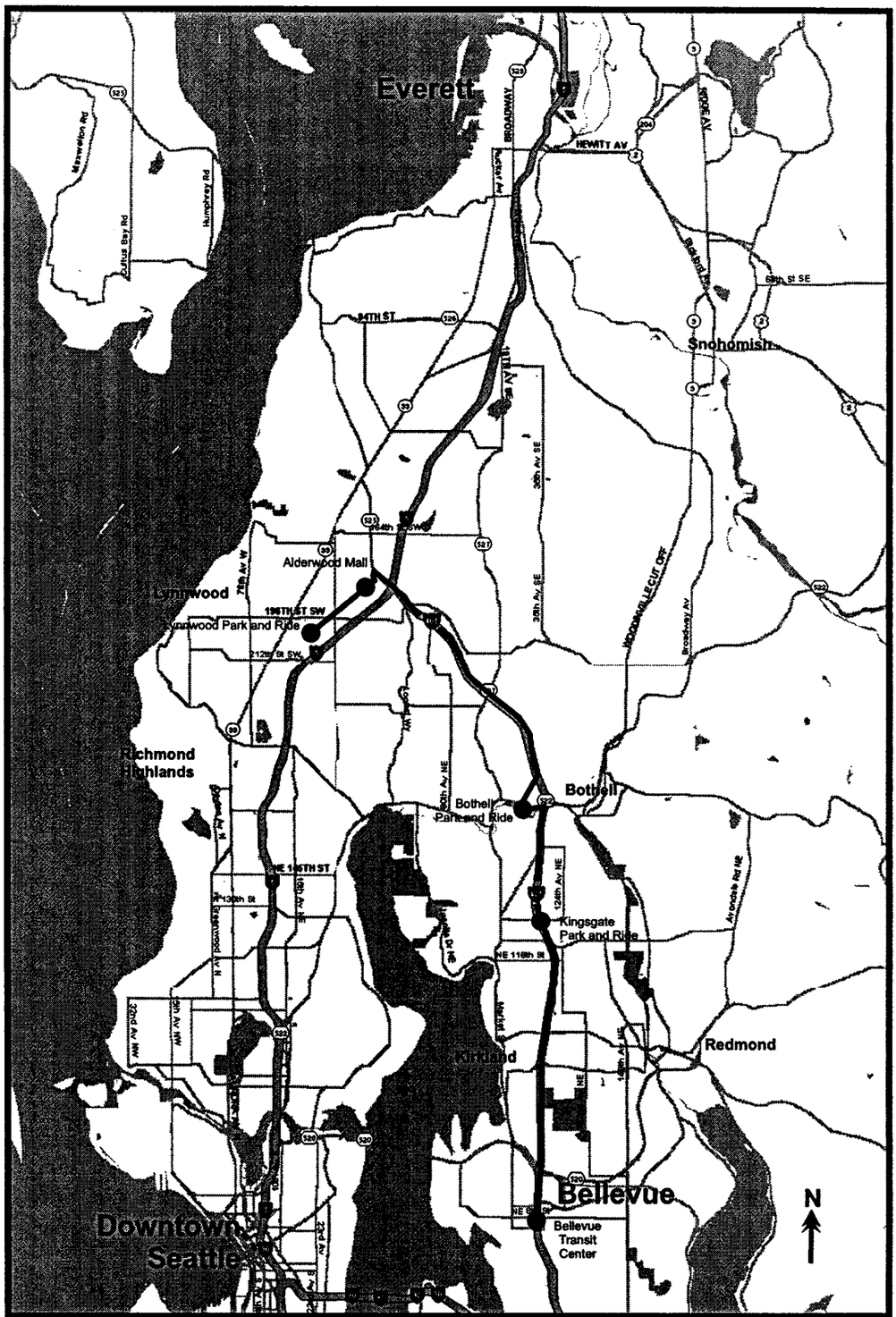
Principal stops along Route D may include:

- Lynnwood Transit Center
- Alderwood Mall
- Bothell Park and Ride Lot
- Kingsgate Park and Ride Lot
- Bellevue Transit Center

Additional stops could include the Canyon Park Park and Ride Lot (after the freeway stop is completed), and the Brickyard and Houghton park and rides lots.

Service is projected to begin in September 1999 and would be phased in over a period of several years. Projected operating statistics for full operation of Route D are shown below. Costs for this service are allocated to the Snohomish and East King subareas.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	30	60	60	40-45	16,800	September 1999
Sat./Sun.	-	60	60			



Legend:

Route D

Bus Stops for Route D

Route D
Lynnwood to Bellevue: I-405

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E: Woodinville to Northgate

Route E was planned to connect the Woodinville and Bothell areas with Lake City and Northgate. Route E runs primarily along Bothell Way, an arterial road through the Kenmore-Lake Forest Park-Lake City areas. Limited stops will maintain high speeds.

Sound Move allows for the adoption of alternatives during detailed planning that "achieve the same system goals and benefits more cost-effectively." Metro currently provides a comparable level of limited-stop service along this corridor (Route 307), with continuing service to downtown Seattle. Therefore the Service Implementation Plan proposes to not implement Route E as a Sound Transit route and reallocate the resources to other East King County routes. This would allow an earlier start date for some other routes, and leave a larger reserve of unprogrammed hours for use on other routes which may need additional service.

Regional Express staff is currently working with King County Metro to analyze a proposal from SeaShore for a route connecting Woodinville and Bothell with downtown Seattle. This route could also serve Lake Forest Park and Shoreline (145th Street stop).

F: Issaquah to Northgate

Route F connects Issaquah and Bellevue with the University District and Northgate. Currently there is no Metro route between Issaquah or Bellevue and Northgate, and Metro reports a number of recent requests to provide this service.

The specific operating plan for this route has not been finalized; it could include features designed to speed up service or reduce operating costs, such as turnbacks, skip-stop operation, or branching operation.

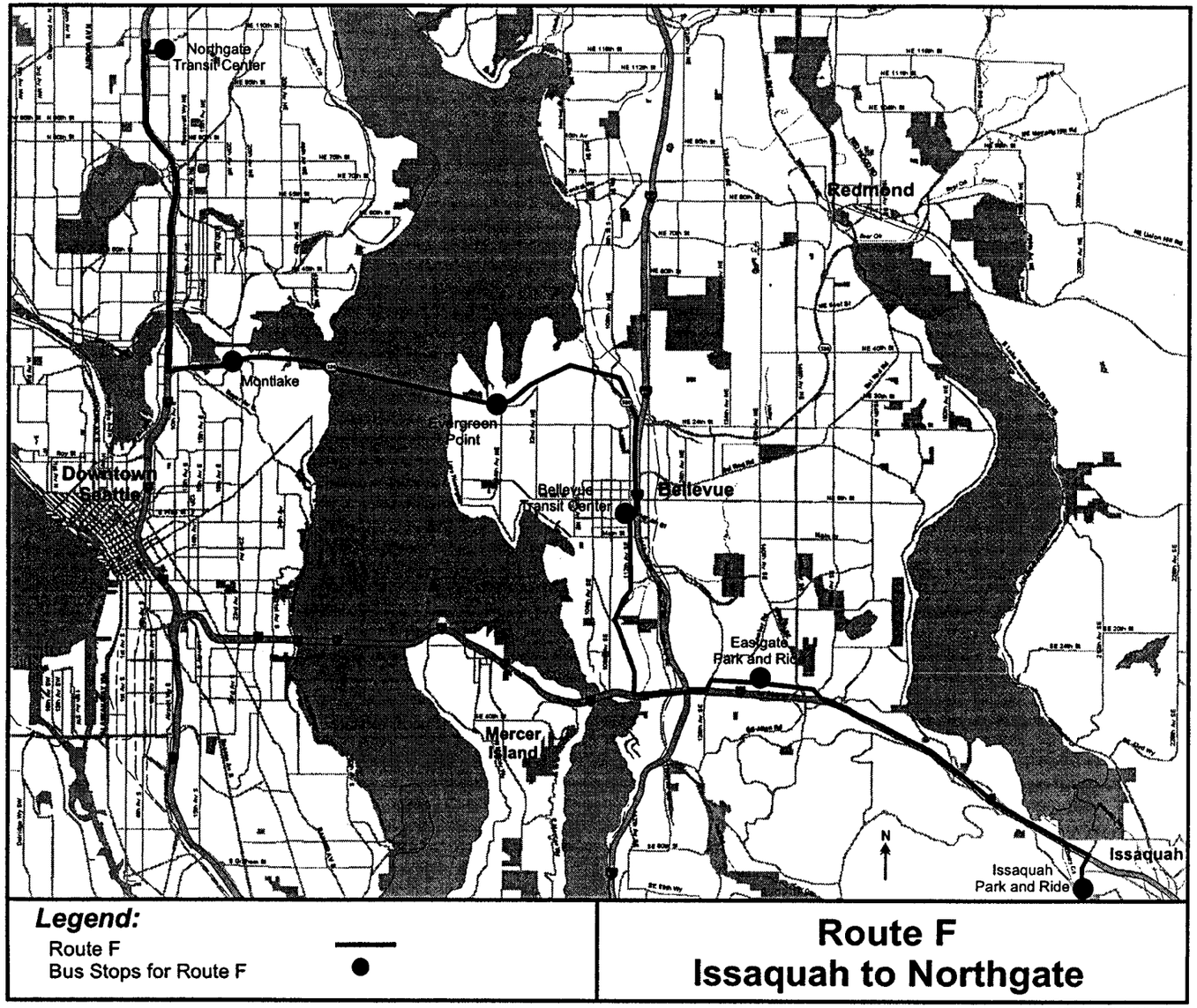
Principal stops along Route F may include:

- Issaquah Park and Ride Lot
- Eastgate Way Park and Ride Lot (future freeway stop is proposed here)
- Bellevue Transit Center
- Evergreen Point freeway stop
- Montlake freeway stop, OR: stops at UW Hospital and UW
- Northgate Transit Center
- Bellevue Community College

Another possible stop includes the South Bellevue Park and Ride Lot.

Service is projected to begin in September 2001 and would be phased in over a period of several years. Projected operating statistics for full operation of Route F are shown below. Costs for this service are allocated wholly to the East King County subarea.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	15	30	60	42-51	31,800	September 2001
Sat./Sun.	-	30	60			



Legend:

Route F

Bus Stops for Route F

Route F
Issaquah to Northgate

G1: Bellevue to Seattle

Sound Move had two components of Route G: Route G1 would have provided bi-directional service at all hours from Redmond to Bellevue and downtown Seattle via I-90. Route G2 would provide peak-period only service between Redmond and downtown Seattle via SR520.

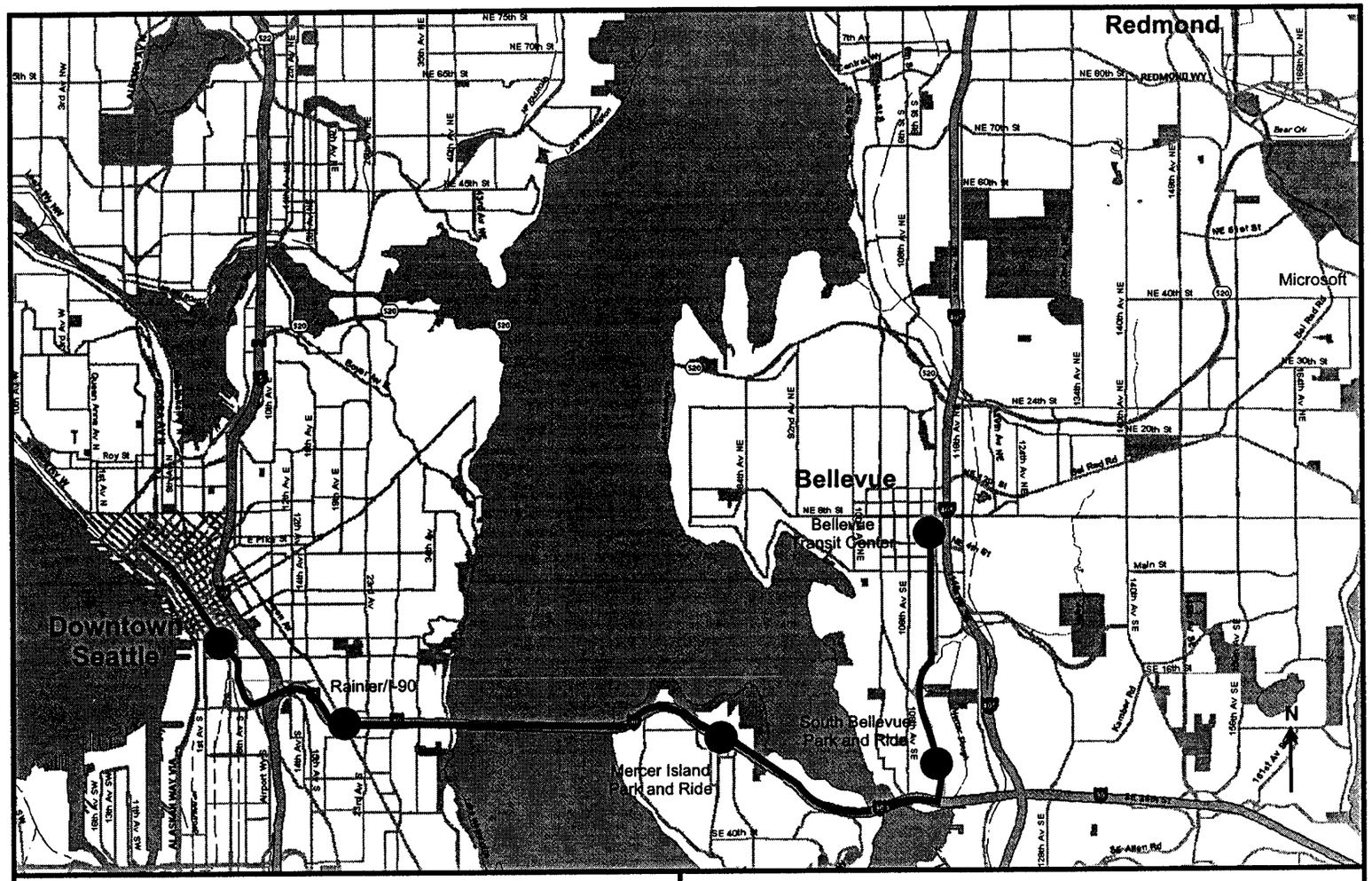
Sound Move allows for the adoption of alternatives during detailed planning that "achieve the same system goals and benefits more cost-effectively". In the case of Route G, the Service Implementation Plan uses a slightly different approach than the original *Sound Move* plan – separating the Bellevue and Redmond markets. G1 would operate from Bellevue and Seattle, generally replacing Metro Route 226, with the elimination of some local stops. G2 would provide all-day express service between Redmond, Overlake, and downtown Seattle via SR 520, avoiding the need to travel via downtown Bellevue. Express service between Redmond and Bellevue would continue to be provided by Metro.

Route G1 would originate at the Bellevue Transit Center, and then operate express via 112th Avenue (see enclosed route map). Principal stops along route G1 may include:

- Bellevue Transit Center
- South Bellevue Way Park and Ride Lot
- Mercer Island Park and Ride Lot
- Rainier/I-90 freeway stop
- Downtown Seattle Transit Tunnel stations OR stops along 3rd Avenue

Service is projected to begin in September 1999. Initially the service levels would match Route 226, and additional service would be phased in over a period of several years. Projected operating statistics for full operation of Route G1 are shown below. Costs for this service are allocated wholly to the East King County subarea.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	7.5	15	30	33	52,400	September 1999
Sat./Sun.	-	30	30			



Legend:

Route G1

Bus Stop for Route G1

Route G1
Bellevue to Seattle

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G2: Redmond to Seattle

As described above, the proposed Service Implementation Plan provides all-day express service between Redmond, Overlake, and downtown Seattle via SR 520, avoiding the need to travel via downtown Bellevue. Express service between Redmond and Bellevue would continue to be provided by Metro.

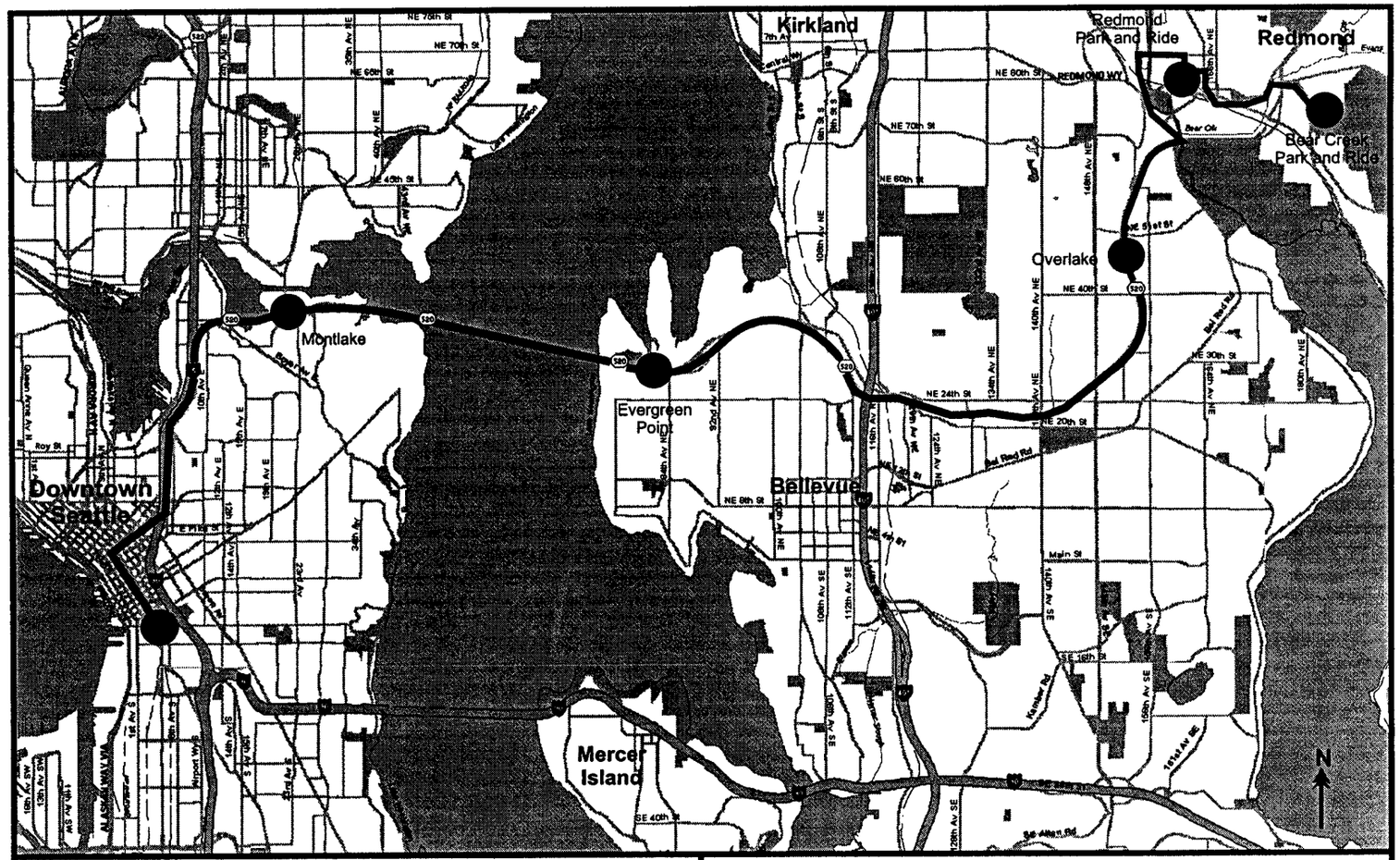
Route G2 would originate at the Bear Creek Park and Ride Lot, operate through downtown Redmond, then follow SR 520 (see enclosed route map). Principal stops along route G2 may include:

- Bear Creek Park and Ride Lot
- Redmond Park and Ride Lot
- Overlake freeway stop (scheduled to open in summer 2000)
- Evergreen Point and Montlake freeway stops
- Downtown Seattle stops

Possible stops include the South Kirkland Park and Ride Lot and direct service on selected trips to major employment centers such as Microsoft.

Service is projected to begin in September 2000 and would be phased in over a period of several years. Projected operating statistics for full operation of Route G2 are shown below. Costs for this service are allocated wholly to the East King County subarea.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	15	30	60	52	31,200	Sept. 2000
Sat./Sun.	-	30	60			



Legend:

Route G2

Bus Stop for Route G2

Route G2
Redmond to Seattle via SR 520

Map © 1998 by Rand McNally R.L. #98-S-132. Map © ETAK, Inc.

H: Bellevue to SeaTac

Regional Express Route H is designed to link Bellevue to SeaTac, with intermediate service to Renton and Southcenter.

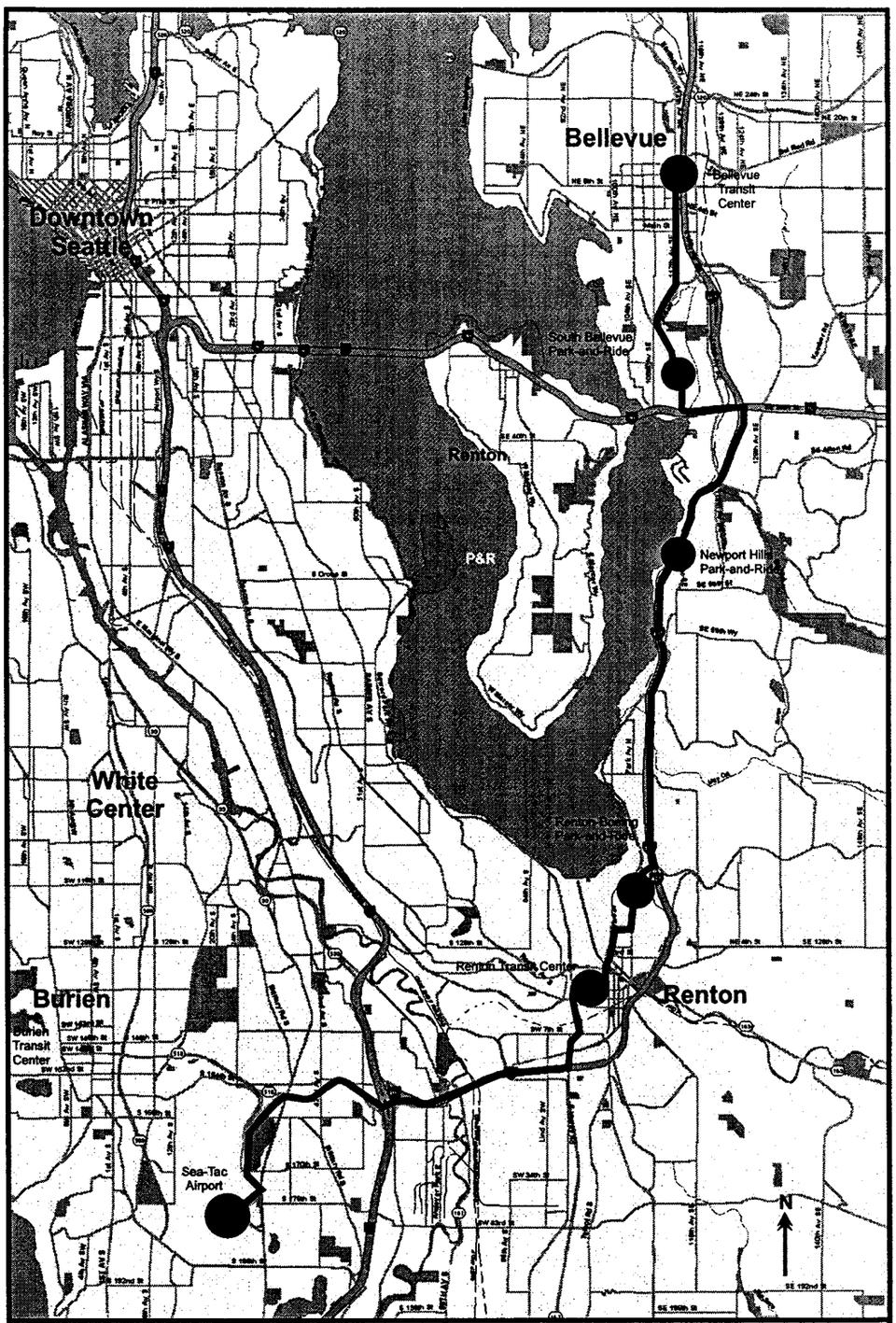
The proposed plan includes the following principal access points:

- Bellevue Transit Center
- South Bellevue Park and Ride Lot
- Newport Hills Park and Ride Lot
- Renton Boeing Park and Ride Lot
- Renton Transit Center
- SeaTac Airport

Additional stops could include Kennydale (30th Street or possible future 44th Street stop), Longacres Commuter Rail Station, and the South Renton Park and Ride Lot. A stop at Southcenter Mall could be added when Sound Transit's proposed freeway stop is constructed on I-405 adjacent to the mall.

Service is projected to begin in September 2001. Initially the service levels would match Route 340; off peak frequencies would be improved late in the program. Projected operating statistics for full operation of Route H are shown below. Costs for this service are allocated to the East King and South King subareas.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	15	30	60	50	26,300	September 2001
Sat./Sun.	-	30	60			



Legend:

Route H

Bus Stop for Route H

Route H
Bellevue to Sea-Tac

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I: Redmond to University District

Regional Express Route I links the Redmond and Kirkland areas to the University District via SR 520.

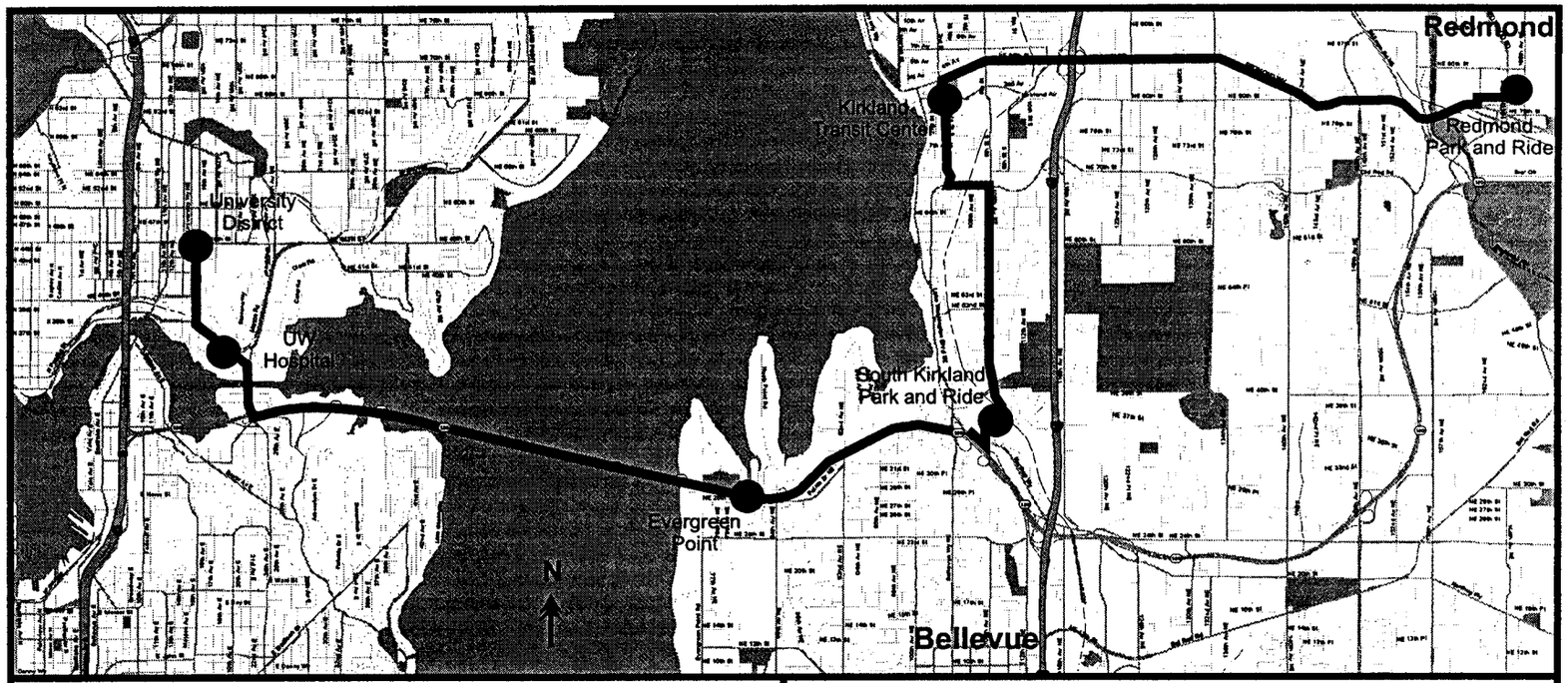
The tentative routing includes limited stops along 85th Street between Redmond and Kirkland and along 108th Avenue South of downtown Kirkland. The routing is subject to change depending on decisions that are made by Sound Transit, the City of Kirkland, and others concerning the location of proposed freeway stops or HOV access points along I-405 and on a possible new or relocated Transit Center in Kirkland.

Principal stops along Route I would likely include:

- Redmond Park and Ride Lot
- Kirkland Transit Center
- South Kirkland Park and Ride Lot
- Evergreen Point freeway stop
- UW Hospital and UW

Service is projected to begin in September 2001 and would be phased in over a period of several years. Projected operating statistics for full operation of Route I are shown below. Costs for this service are allocated wholly to the East King County subarea.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	15	30	60	43	27,800	September 2001
Sat./Sun.	-	30	60			



Legend:

Route I

Bus Stop for Route I

Route I
Redmond to University District

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J: Federal Way to Bellevue

Regional Express Route J links Federal Way to Bellevue, with intermediate service to Auburn, Kent, and Renton. Since the South King County budget is constrained, off-peak service would only operate hourly.

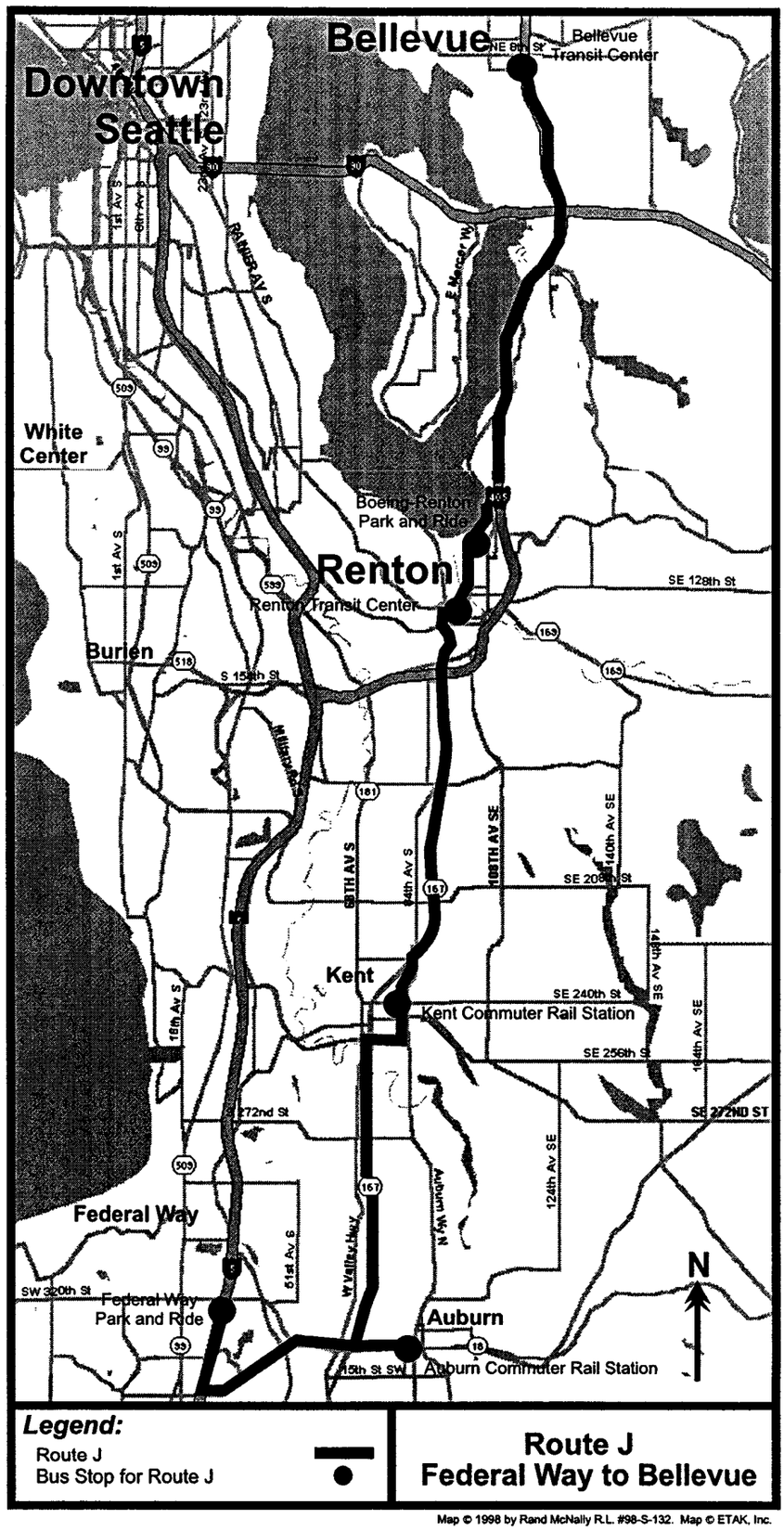
The route would begin in Federal Way and use SR 18 to Auburn. From there it would follow SR 167 and I-405. The plan includes the following principal access points:

- Federal Way Park and Ride Lot
- Auburn Commuter Rail Station
- Kent Commuter Rail Station
- Renton Transit Center
- Renton Boeing Park and Ride Lot
- Bellevue Transit Center

Other possible stops include the Kent Park and Ride Lot and South Renton Park and Ride Lot.

Service is projected to begin in September 1999 and would be phased in over a period of several years. Projected operating statistics for full operation of Route J are shown below. Costs for this service are allocated to the East King and South King County subareas.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	30	60	60	65	24,800	September 1999
Sat./Sun.	-	60	60			



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K: Puyallup to Bellevue

Route K links the South Hill/Puyallup area to Bellevue, with service to Auburn, Kent, and Renton. Routes J and K would have operated along a common corridor from Auburn to Bellevue, with synchronized schedules.

Since most of Route K overlaps Route J, and since the South King County budget is constrained, the proposed plan does not include route K as originally planned. Instead, Route U would be extended from Puyallup to Auburn, with some trips continuing to Renton during peak periods. See the description below for route U. *Sound Move* allows for the adoption of alternatives such as this during detailed planning that "achieve the same system goals and benefits more cost-effectively."

M: SeaTac to Seattle

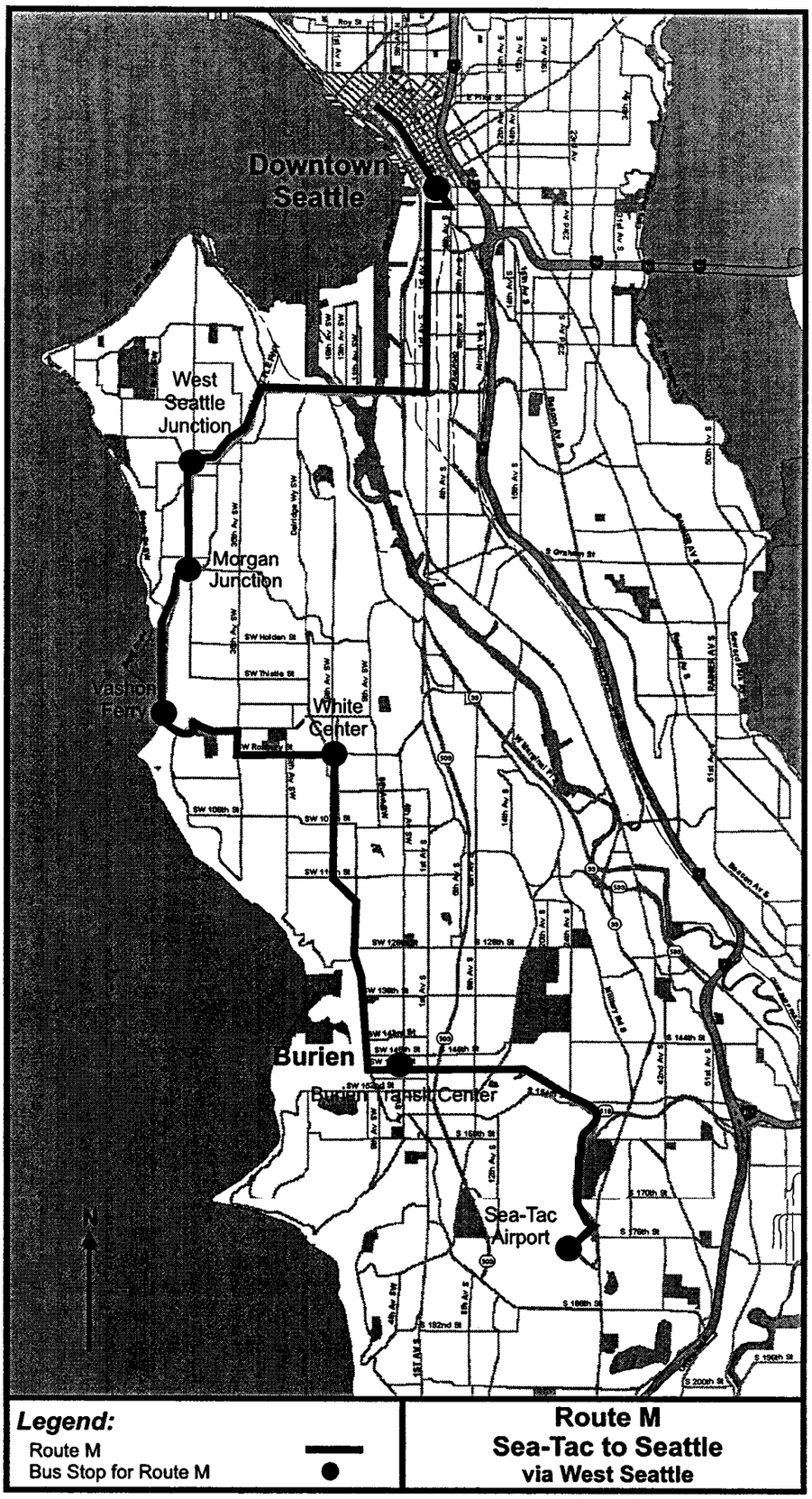
Route M links SeaTac to Seattle via West Seattle and also serves the communities of Burien, White Center, and Fauntleroy.

The proposed routing is shown on the enclosed map. Between White Center and Burien an alternative routing via SR 509 may be used. It includes the following principal access points:

- Downtown Seattle
- West Seattle Junction Transit Center
- Morgan Junction (California and Fauntleroy)
- Fauntleroy-Vashon Ferry Terminal
- White Center Transit Center
- Burien Transit Center
- SeaTac Airport

Service is projected to begin in September 1999. Initially the route would only operate on weekdays during peak; midday, evening, and weekend service would be phased in during later years. Projected operating statistics for full operation of Route M are shown below. Costs for this service are allocated to the South King subarea.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	30	30	60	68	31,000	September 1999
Sat./Sun.	-	60	60			



Legend:
Route M
Bus Stop for Route M

Route M
Sea-Tac to Seattle
via West Seattle

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N: Tacoma to SeaTac to Seattle

Route N was planned to link Tacoma, Federal Way, and SeaTac. In *Sound Move*, Route N would have continued to Seattle until completion of the light rail system between SeaTac and Seattle, after which Route N would terminate at SeaTac.

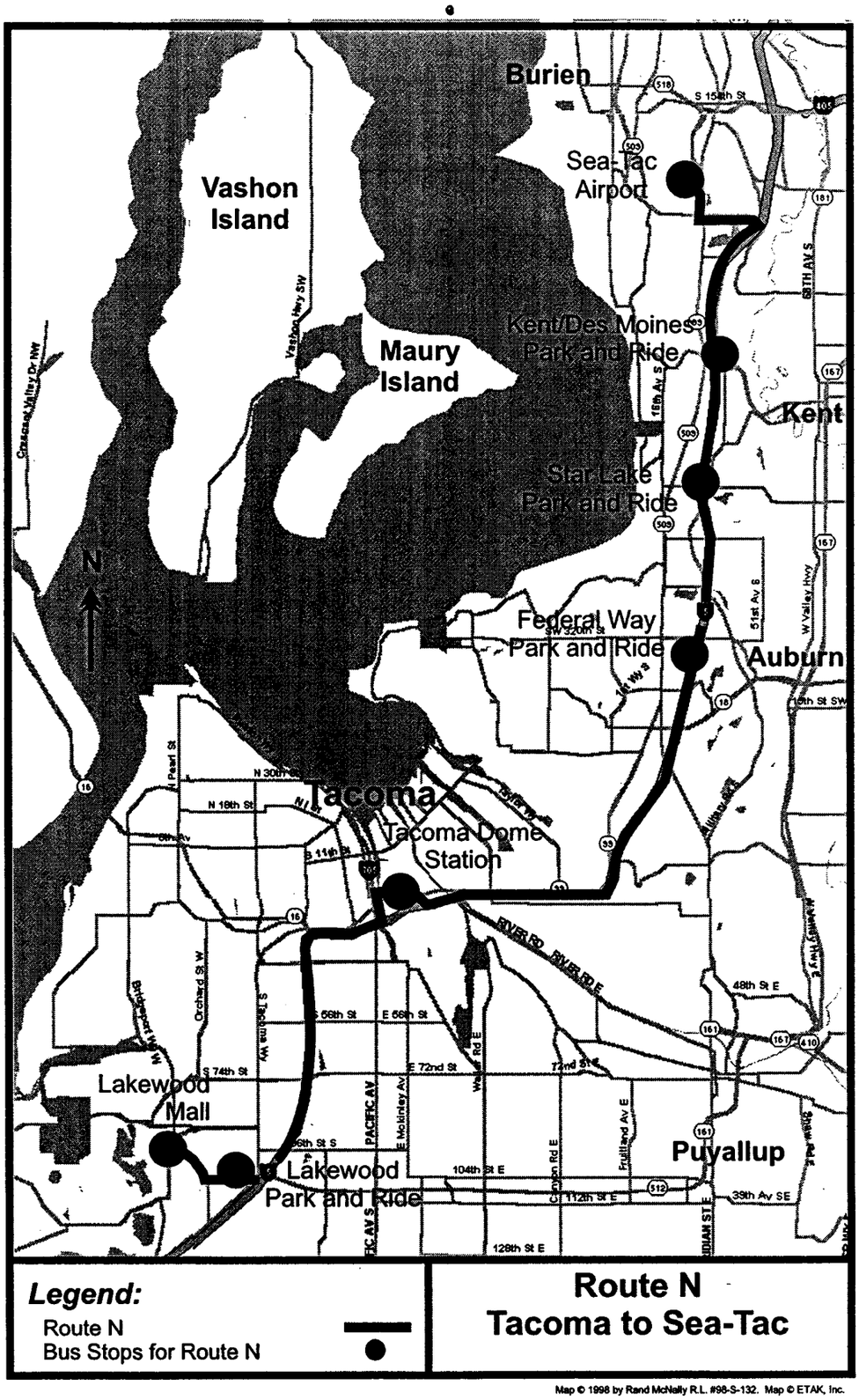
Sound Move allows for the adoption of alternatives during detailed planning that "achieve the same system goals and benefits more cost-effectively." Since the South King County subarea budget is constrained, and Metro provides good express service from SeaTac to downtown Seattle, the recommended plan provides service only as far as SeaTac. Metro would continue to provide express service from SeaTac to downtown Seattle (Route 194). At the southern end, service would be extended to Lakewood.

Principal stops along route N may include:

- Lakewood Transit Center
- Lakewood Park and Ride Lot (currently at SR 512; may be relocated to Lakewood Commuter Rail Station)
- Tacoma Dome Station (connecting service to downtown Tacoma via Link light rail)
- Federal Way Park and Ride Lot
- Star Lake Park and Ride Lot
- Kent/Des Moines Park and Ride Lot
- SeaTac Airport

Service is projected to begin in September 1999 and would be phased in over a period of several years. Projected operating statistics for full operation of Route N are shown below. Costs for this service are allocated to the South King and Pierce County subareas.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	30	30	60	65	30,700	September 1999
Sat./Sun.	-	30	60			



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O/P: Tacoma/Lakewood to Seattle Express

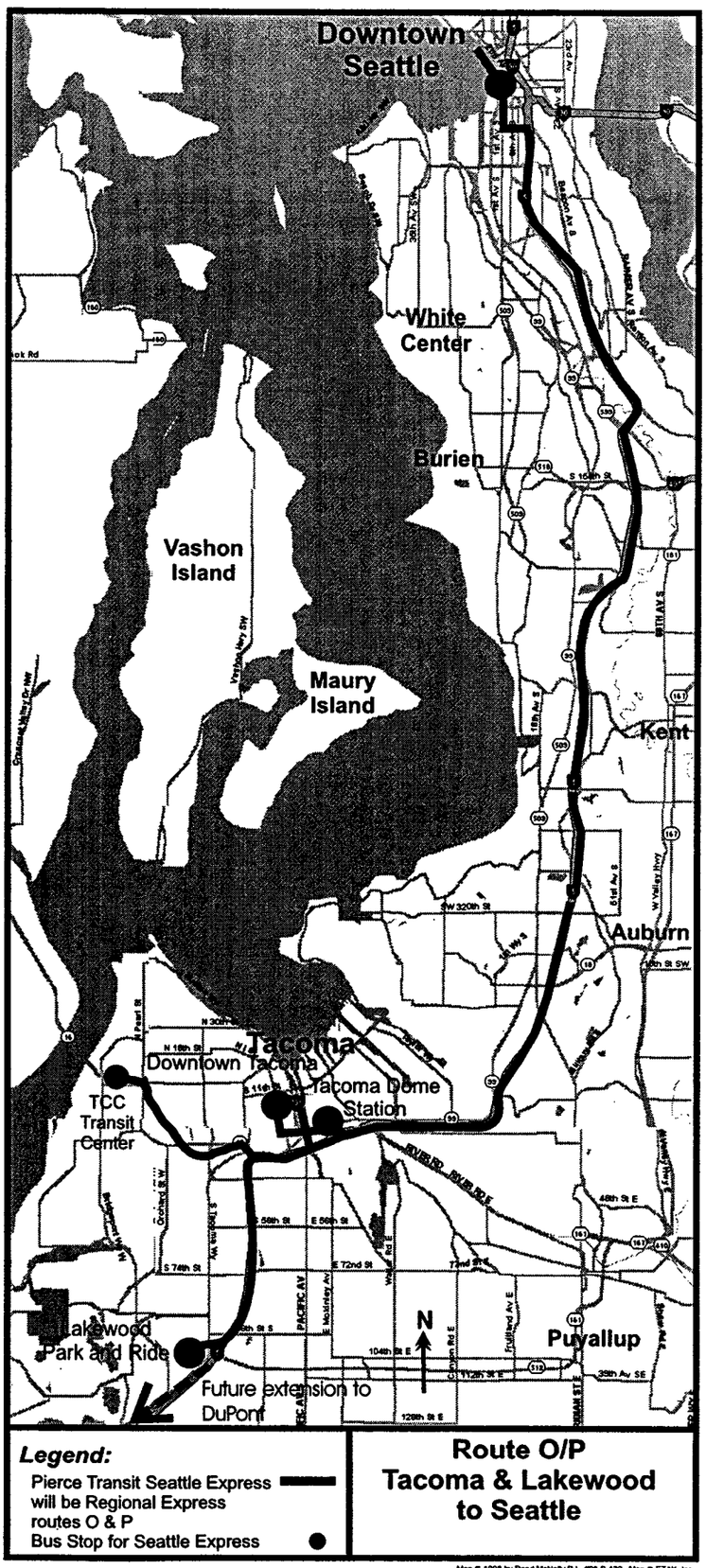
Routes O and P link Tacoma and Lakewood to downtown Seattle. The concept for Routes O and P in the *Sound Move* plan was to provide express bus service to Seattle in addition to the Sounder Commuter Rail service. This service is currently provided by Pierce Transit as the Seattle Express (Routes 590-595). Sound Transit currently funds a portion of this service.

Because of the success of the existing service and the similarity to Routes O and P, there are no major changes proposed for Routes O and P. Sound Transit would assume full funding of the Seattle Express service in September 1999 (with the exception of the portion of Route 595 serving Gig Harbor, which is outside the Sound Transit area, and which Pierce Transit would continue to fund).

Some expansion of service is provided, and the use of articulated buses will relieve crowding. In the future, service would be extended from Lakewood to the proposed Dupont Park and Ride Lot. The addition of an off-peak stop at Federal Way is under consideration.

Routes O/P are shown on the enclosed map, and operating statistics for full implementation are shown below.

	Service Frequency (minutes)			**Trip Time**	**Annual Service Hours**	**Start Date**
	Peak	**Mid-day**	**Evening**			
Weekday	5-10	30	60	60-80	97,000	September 1999
Sat./Sun.	-	30	60			



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Q: Tacoma Dome to Auburn

Route Q links Tacoma and Auburn via SR 167. Originally *Sound Move* showed possible stops in Puyallup and Sumner via SR 167.

Sound Move allows for the adoption of alternatives during detailed planning that "achieve the same system goals and benefits more cost-effectively." Pierce Transit is currently upgrading service from Tacoma to Puyallup and Sumner. Service from Puyallup and Sumner to Auburn would be provided by Route U. Therefore a higher-speed option for Route Q is proposed from Tacoma to Auburn via I-5 and SR18.

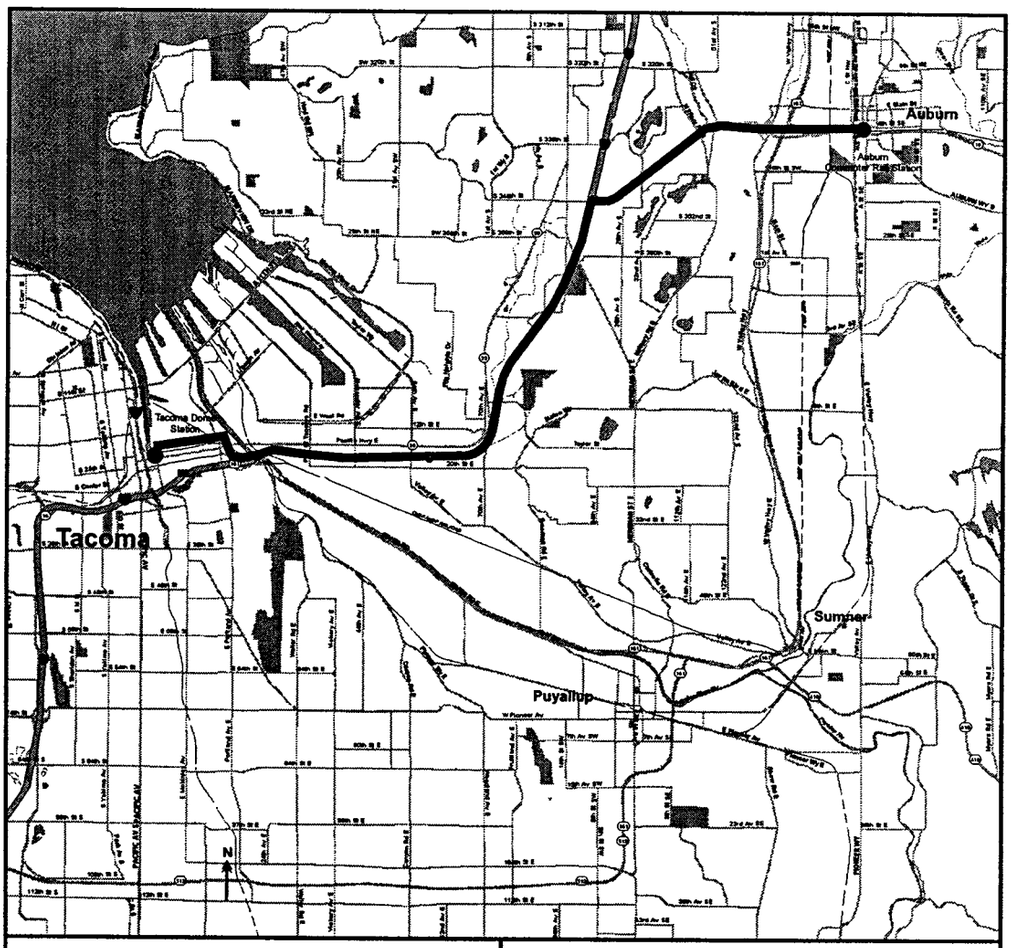
Principal stops along Route Q may include:

- Tacoma Dome Station
- Auburn Commuter Rail Station

Continuing or connecting service to the Auburn Boeing plant and GSA facility is under consideration.

Service is projected to begin in September 2001 and would be phased in over a period of several years. Projected operating statistics for full operation of Route Q are shown below. Costs for this service are allocated to the Pierce subarea.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	30	60	-	23	7,000	September 2001
Sat./Sun.	-	60	-			



Legend:

Route Q

Bus Stop for Route Q

Route Q
Tacoma Dome to Auburn

R: South Hill to Dupont Express

Route R was planned to link South Hill to Dupont. The proposed terminals are at the South Hill Transit Center and the future Dupont Park and Ride Lot. The proposed routing is generally via 176th Street, although the western portion of that road, through the Fort Lewis Military Reservation, has not been constructed yet and will probably not be completed before 2006. Therefore, this route would be deferred until after the road is constructed.

S: Lakewood – Tacoma

Route S links Lakewood to downtown Tacoma.

Sound Move allows for the adoption of alternatives during detailed planning that "achieve the same system goals and benefits more cost-effectively." Since the proposed extension of Route N provides express service between Tacoma and Lakewood, as does route O/P (Seattle Express), the plan does not include a separate Route S. Sound Transit would reallocate the resources to other regional express service in Pierce County, such as improved service on the Seattle Express.

T: Mid-county to Downtown Tacoma

Route T would provide express service from the mid-county area to downtown Tacoma. The proposed southern terminal in Sound Move was at Parkland. The proposed routing is via Pacific, with limited stops.

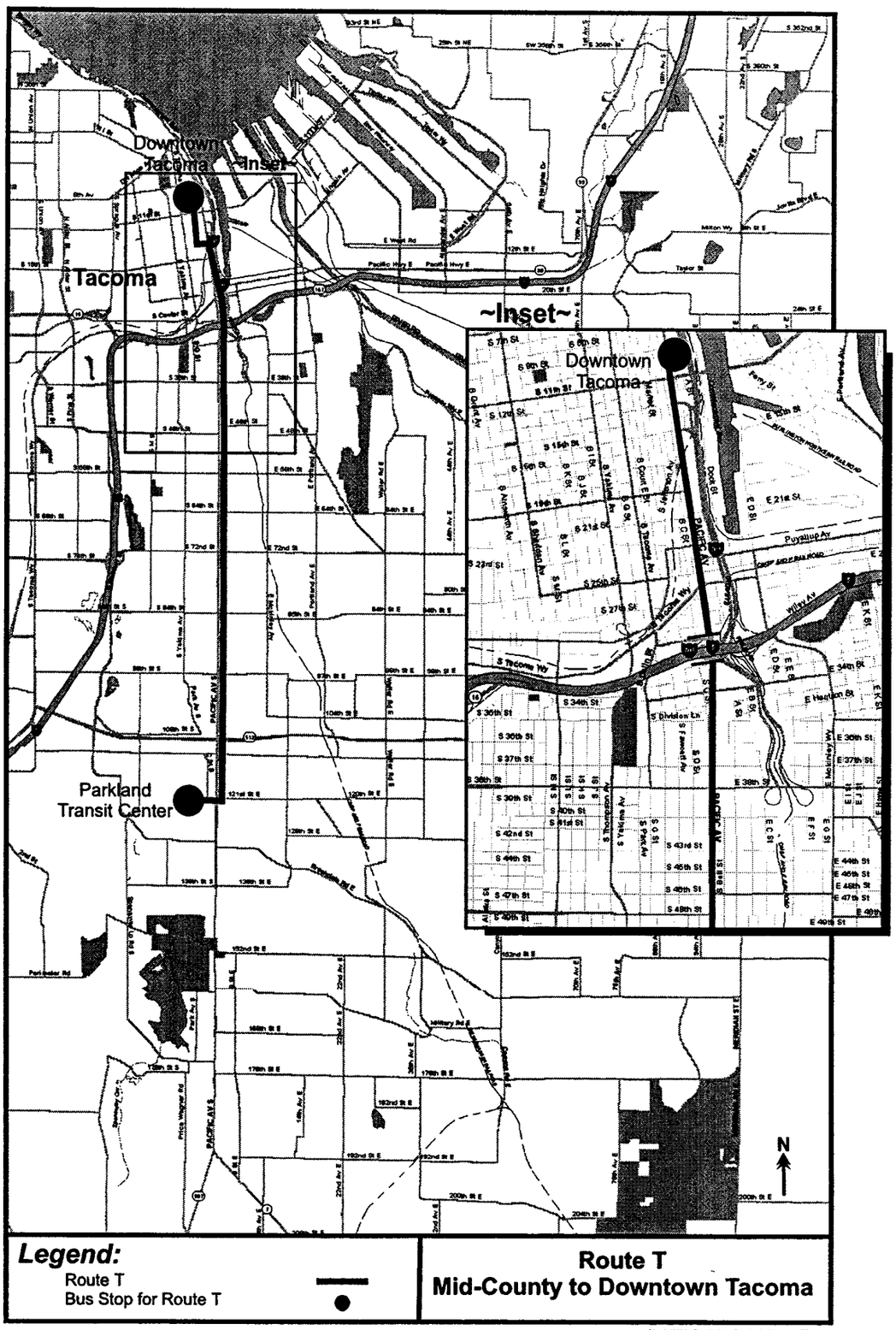
Principal stops along Route T may include:

- Parkland Transit Center
- Downtown Tacoma

Additional stops could include those along Pacific Avenue, Roy Wye Park and Ride Lot, and a deviation via the Tacoma Dome Station may be included.

Service is projected to begin in September 2002 and would be phased in over a period of several years. Projected operating statistics for full operation of Route T are shown below. Costs for this service are allocated to the Pierce subarea.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	30	60	-	29	12,100	September 2002
Sat./Sun.	-	60	-			



Legend:

Route T

Bus Stop for Route T

Route T
Mid-County to Downtown Tacoma

Map © 1998 by Rand McNally R.L. #98-S-132. Map © ETAK, Inc.

U: Lakewood – Puyallup

Route U provides a fast link between Lakewood and Puyallup via SR 512. The original proposed terminals are Lakewood Mall Transit Center and the new South Hill Transit Center in Puyallup.

As described above for Route K, an extension of Route U is proposed from Puyallup through Sumner to Auburn. During peak periods, selected trips may be extended to Renton, primarily to serve the Boeing facility there.

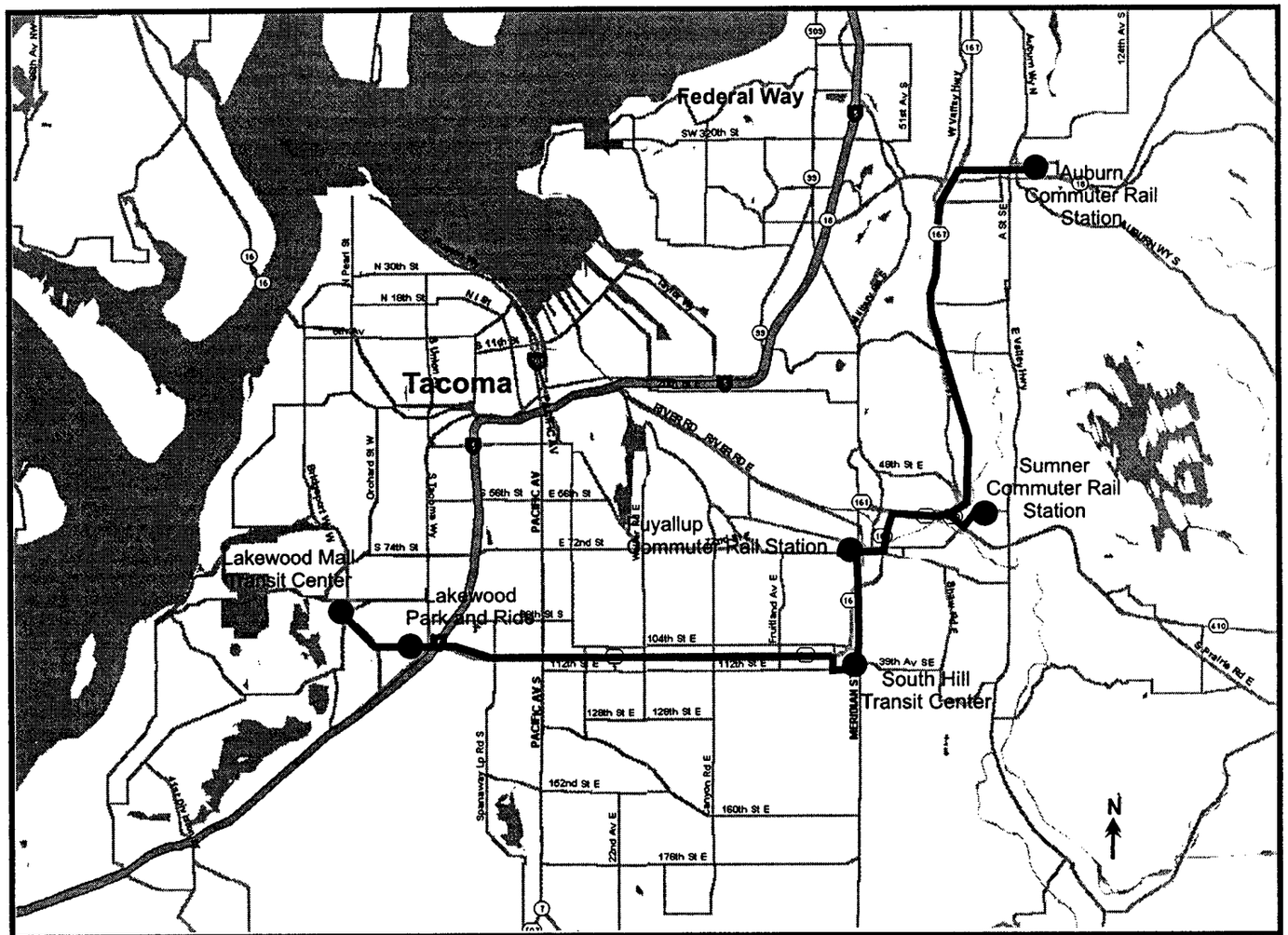
Principal stops along route U may include:

- Lakewood Transit Center
- Lakewood Park and Ride Lot
- South Hill Transit Center
- Puyallup Commuter Rail Station
- Sumner Commuter Rail Station
- Auburn Commuter Rail Station

Additional stops could include Parkland Transit Center and South Hill Park and Ride Lot, and stops in Kent and Renton on the possible peak period extension. Continuing or connecting service to the Auburn Boeing plant and GSA facility is under consideration.

Service is projected to begin in September 2001 and would be phased in over a period of several years. Projected operating statistics for full operation of Route U are shown below. Costs for this service are allocated to the Pierce County and South King County subareas.

	Service Frequency (minutes)			Trip Time	Annual Service Hours	Start Date
	Peak	Mid-day	Evening			
Weekday	30	60	60	56-96	27,900	September 2000
Sat./Sun.	-	60	60			



Map © 1998 by Rand McNally R.L. #98-S-132. Map © ETAK, Inc.

XII. FINANCIAL PLAN

Sound Move calls for Regional Express bus service to begin service in the year 2000 and included $361 million to fund the program, which consisted of operating and maintaining 20 routes and funding the capital costs to purchase the bus fleet and provide the facilities necessary to maintain the fleet. The *Sound Move* capital budget assumed purchasing up to 169 buses at $400,000 per bus, with additional maintenance facility costs budgeted at $130,000 per bus. *Sound Move* assumed an average cost per bus hour of $63 (1995 $) which included a 15% contingency for meeting any new paratransit service requirements to comply with the Americans with Disabilities Act (ADA).

Part of the planning effort to implement service has been to refine these initial cost estimates. A financial plan model has been developed that details the potential cost by each agency to operate Regional Express routes. Then, these amounts were applied to the proposed service included in the SIP, with operating costs projected over the life of the service (through 2006). Projections of revenues by individual source will also be included as a final test of affordability. At this time we have not included projections of revenues from other sources (such as farebox and advertising) above the *Sound Move* assumptions of 24% farebox recovery.

While refining the costs of the Regional Express services analyzed in the SIP, we have accounted for a number of costs not specifically included in *Sound Move*. These additional costs have been accommodated within the original budget included in *Sound Move* by phasing in the service levels of individual routes or by staging the implementation of routes over time.

Sound Transit Administrative Costs

Internal administrative costs include Regional Express staff salaries and benefits, other staff costs (such as rent, office supplies, etc.), and costs allocated to Regional Express by support departments (Executive, Legal, Board Office, Public and Government Affairs, and Finance and Administration). Staff projections indicate that these costs will account for approximately 5% ($18 million in 1995$) of all Regional Express bus program costs through 2006.

Operating Reserves

The cost estimates included in *Sound Move* planning assumptions were based on historical cost information provided by the region's public transit operators. Based on work over the past several months with local transit operators, the cost assumptions used in *Sound Move* continue to reasonably approximate the anticipated costs of contracting with local operators to provide Regional Express bus service. Therefore, the financial plan for the SIP uses *Sound Move's* $63 per platform hour assumption for contracting with local operators for bus operations and maintenance.

The services provided by local transit operators will not, however, be the only O&M costs incurred by Sound Transit. For instance, while local transit operators will expand its liability insurance to cover operation of Sound Transit coaches (included within the $63 per hour planning estimate), Sound Transit must also pay for its own liability insurance (not included in the $63 per hour planning estimate). In the SIP's financial plan, 10% of the Regional Express

bus system total O&M amounting to approximately $2.7 million per year, is set aside in a subarea reserve pool earmarked for paying these additional costs.

Expansion Hours

The SIP at this point does not include a reserve fund to increase service levels beyond those described in the alternative. This reserve could be created in one of several ways, including: savings from the ADA contingency (see next section), reserving revenues from farebox recovery above 24% and advertising from Regional Express services not currently included in the financial plan, or by recognizing this as an issue for consideration in future updates of the *Sound Move* financial plan.

Americans With Disability Act Compliance

Sound Transit fully acknowledges the ~~disabled community~~ as a stakeholder in the building of the Regional Express bus system. Regional Express is committed to meeting all accessibility requirements mandated by the Americans with Disabilities Act (ADA). To this end, the Sound Transit fleet will be 100% accessible. Accessibility features will also be addressed in the capital facilities that Regional Express will serve. ~~The~~ *Sound Move* set aside 15% of direct service costs for ~~ADA. Our assumption is that the region's transit agencies comply with ADA requirements for service within their respective counties.~~ Sound Transit will work with regional transit partners and the Federal Transit Administration to determine its ADA responsibilities associated with Regional Express bus service. ~~These discussions could result in a financial responsibility for Sound Transit of less than 15% of direct operating costs, which could provide additional resources to cover expansion hours.~~

***Sound Move* Assumptions**

Sound Move's capital and operating cost commitments were detailed in Appendix A. These commitments were based on several financial planning assumptions: the number of direct service hours needed for each route, the number of miles for each route contained within each subarea, the cost of providing an hour of direct service, ~~the cost of providing ADA service within each subarea~~, the number of buses required by each route, the cost of purchasing a bus, and the cost of providing additional maintenance facility capacity within each subarea.

In *Sound Move*, the cost commitments for each route's subarea allocation of operating and capital costs are rounded to the nearest million dollars. Sound Transit's 1998 adopted budget used a different – and more accurate rounding – methodology than did *Sound Move*. In the adopted 1998 budget, costs for routes in Sound Transit's were rounded to the nearest thousand dollars. The SIP financial plan uses the Board-adopted 1998 budget as a baseline.

The change in rounding methodology results in some changes in the split between operating and capital dollars. Further, the different rounding methodology results in small changes in the split of expenditures by subareas. However, there is no change in the 10-year total cost for the Regional Express bus program.

The following table illustrates the changes resulting from the different rounding methodologies:

Subarea	Sound Move		Adopted 1998 Budget and SIP	
	O&M		O&M	
Snohomish	$	46	$	46
South King	$	28	$	30
East King	$	110	$	111
Pierce	$	85	$	86
Subtotal	*$*	*269*	*$*	*272*
	Capital		Capital	
Snohomish	$	10	$	9
South King	$	11	$	10
East King	$	35	$	34
Pierce	$	36	$	37
Subtotal	*$*	*92*	*$*	*89*
	Total		Total	
Snohomish	$	56	$	55
South King	$	39	$	40
East King	$	145	$	145
Pierce	$	121	$	122
TOTAL	**$**	**361**	**$**	**361**

REGIONAL EXPRESS BUS FINANCIAL MODEL

DRAFT

Subarea Cost Summary

Proposed Service Implementation Plan

Route Description	Alternative Description	Target One Way Time	Target Frequency Pk/Mid/Eve	Route Hours	Buses Assigned	Start Date	10 YEAR TOTAL ($Millions) CAPITAL	O&M	SUBAREA
*Snohomish**									
A Everett/Northgate: I-5	A4N 1-5 to Northgate	52	30/30/60	22,244	4	Sep-00	$1.0	$6.1	$7.1
B Everett/Lynnwood/Seattle: I-5	B3 two faster branches	66/50	30/30/60	47,868	9	Sep-99	$3.6	$19.5	$23.1
C Everett to Bellevue: I-5,I-405	C3 I-5, Ash Way	49	30/60/60	8,894	2	Sep-99	$0.5	$4.2	$4.7
D Lynnwood to Bellevue: I-405	D2 defer Canyon Park	42	30/60/60	6,382	2	Sep-99	$0.5	$2.0	$2.5
Z1 Unprogrammed Hours	Z1 Snohomish	N/A	N/A	7,002	1	Sep-99	$0.3	$2.0	$2.2
Subtotal Snohomish				92,390	18		$5.9	$33.7	$39.7
			Spare Vehicles:		4	Spares	$1.1	N/A	$1.1
			Total Vehicles:		22	Start-up	$0.4	$0.0	$0.4
						ADA	N/A	$5.1	$5.1
	Unprogrammed hours:	*5.8%*				ST Admin	$0.4	$6.8	$7.2
						Total Snohomish	$7.9	$45.6	$53.5
						Budget	$6.8	$45.7	$52.5
						Surplus (Shortfall)	($1.1)	$0.0	($1.0)
East King									
C Everett to Bellevue: I-5,I-405	C3 I-5, Ash Way	49	30/60/60	7,426	2	Sep-99	$0.5	$3.5	$4.0
D Lynnwood to Bellevue: 1-405	D2 defer Canyon Park	42	30/60/60	10,428	2	Sep-99	$0.5	$3.3	$3.8
E Woodinville to Northgate	E5 reallocate resources	-	-	0	0	Jan-07	$0.0	$0.0	$0.0
F Issaquah to Northgate	F1 all stops	49	15/30/60	32,135	8	Sep-00	$2.0	$10.1	$12.1
G1 Bellevue to Seattle: 1-90	G1d Bellevue-Seattle only	25	7.5/15/30	55,548	12	Sep-99	$4.9	$24.4	$29.3
G2 Redmond to Seattle: SR 520	G2c all day	52	15/30/60	31,173	9	Sep-00	$3.5	$11.4	$14.9
H Bellevue to SeaTac	H220 defer Southcenter	50	20/30/60	18,136	5	Sep-01	$1.2	$5.6	$6.8
I Redmond to U. District	I1 via 85th	43	15/30/60	27,847	7	Sep-00	$1.8	$9.6	$11.4
J Fed.Way/Auburn/Renton/Bellevue	J2m skip S. Bellevue P&R	65	30/60/60	11,158	3	Sep-99	$0.8	$4.4	$5.2
K Puyallup/Auburn/Renton/Bellevue	K7 serve with routes J & U	-	see J & U	0	0		$0.0	$0.0	$0.0
U Lakewood to Auburn	U7 Lakewood - Auburn	56/96	30/60/60	1,114	0	Sep-00	$0.0	$0.4	$0.4
Z2 Unprogrammed Hours	Z2 East King	N/A	N/A	26,096	4	Sep-99	$1.3	$9.2	$10.5
Subtotal East King				221,062	52		$15.2	$81.8	$98.3
			Spare Vehicles:		11	Spares	$3.2	N/A	$3.2
			Total Vehicles:		63	Start-up	$1.6	$0.3	$1.8
						ADA	N/A	$12.3	$12.3
	Unprogrammed hours:	*11.2%*				ST Admin	$1.0	$16.6	$17.7
						Total East King	$21.0	$111.0	$131.9
						Budget	$25.4	$110.0	$136.3
						Surplus (Shortfall)	$4.4	$0.0	$4.4

Footnote: **Capital - vehicle deficit is balanced by capital maintenance facility capital funds.*

Proposed Service Implementation Plan (*continued*)

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Route Description	Alternative Description	Target One Way Time	Target Frequency Pk/Mid/Eve	Route Hours	Buses Assigned	Start Date	10 YEAR TOTAL ($Millions) CAPITAL	O&M	SUBAREA
*South King**									
H Bellevue to SeaTac	H220 defer Southcenter	50	20/30/60	8,148	2	Sep-01	$0.5	$2.5	$3.0
J Fed.Way/Auburn/Renton/Bellevue	J2m skip S. Bellevue P&R	65	30/60/60	13,637	3	Sep-99	$0.8	$5.4	$6.1
K Puyallup/Auburn/Renton/Bellevue	K7 Serve with routes J & U	-	see J & U	0	0		$0.0	$0.0	$0.0
M SeaTac/West Seattle/Seattle	M3 all stops; via Ambaum	68	30/30/60	30,906	6	Sep-99	$1.5	$9.8	$11.4
N Tacoma/Federal Way/SeaTac	N4 Lakewood-SeaTac	65	30/30/60	16,628	3	Sep-99	$8.0	$6.2	$6.9
U Lakewood to Auburn	U7 Lakewood-Auburn	56/96	30/60/60	6,127	2	Sep-00	$0.5	$2.1	$2.6
Z3 Unprogrammed Hours	Z3 South King	N/A	N/A	0	0	Sep-99	$0.0	$0.0	$0.0
Subtotal South King				75,447	16		$3.6	$26.0	$30.0
			Spare Vehicles:		3	Spares	$1.0	N/A	$1.0
			Total Vehicles:		19	Start-up	$0.6	$0.1	$0.7
						ADA	N/A	$3.9	$3.9
	Unprogrammed hours:	*0.0%*				ST Admin	$0.3	$5.3	$5.6
						Total South King	$5.4	$35.3	$40.7
						Budget	$7.6	$29.5	$37.1
						Surplus (Shortfall)	$2.2	($5.7)	($3.6)

Footnote: **O&M shortfall expected to be covered by reprogramming capital dollars and monitoring carefully costs and revenues over the life of the program.*

Pierce									
K Puyallup/Auburn/Renton/Bellevue	K7 serve with routes J & U	-	see J & U	0	0		$0.0	$0.0	$0.0
N Tacoma/Federal Way/SeaTac	N4 Lakewood-SeaTac	65	30/30/60	14,027	2	Sep-99	$0.5	$5.2	$5.7
O/P Tacoma/Lakewood to Seattle	O3 Seattle Express: +Dupont	existing	existing+	97,500	43	Sep-99	$12.7	$42.4	$55.1
Q Tacoma Dome to Auburn: SR-167	Q4 Tacoma-Auburn via I-5,18	23	30/60/-	7,033	2	Sep-01	$0.4	$2.1	$2.5
R South Hill to Dupont	R5 after 2006	-	-	0	0		$0.0	$0.0	$0.0
S Lakewood to Tacoma	S6 serve with route N	-	-	0	0		$0.0	$0.0	$0.0
T Midcounty to Downtown	T2	29	30/60/-	12,128	3	Sep-02	$0.6	$2.5	$3.1
U Lakewood to Auburn	U7 Lakewood-Auburn	56/96	30/60/60	20,610	6	Sep-00	$1.5	$7.1	$8.6
Z4 Unprogrammed Hours	Z4 Pierce	N/A	N/A	12,726	3	Sep-99	$0.9	$4.1	$5.0
Subtotal Pierce				164,025	59		$16.7	$63.3	$80.0
			Spare Vehicles:		12	Spares	$2.4	N/A	$2.4
			Total Vehicles:		71	Start-up	$2.7	$0.0	$2.7
						ADA	N/A	$9.5	$9.5
	Unprogrammed hours:	*6.4%*				ST Admin	$1.1	$12.8	$14.0
						Total Pierce	$23.0	$85.7	$108.6
						Budget	$27.6	$85.7	$113.3
						Surplus (Shortfall)	$4.6	$0.0	$4.7

Sound Transit Total				552,923	145		$41.4	$204.8	$248.0
			Spare Vehicles:		29	Spares	$7.6	N/A	$7.6
			Total Vehicles:		175	Start-up	$5.4	$0.4	$5.7
						ADA	N/A	$30.8	$30.8
						ST Admin	$2.9	$41.6	$44.5
						Total	$57.2	$277.5	$334.8
						Budget	$67.4	$271.8	$339.2
						Surplus (Shortfall)	$10.2	($5.7)	$4.5